

# AMERICAN VETERINARY REVIEW

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# AMERICAN VETERINARY REVIEW.

MAY, 1913.

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## EDITORIAL.

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### EUROPEAN CHRONICLES.

Paris, March 15, 1913.

**AUTONOMOUS LIFE OF VISCERAL APPARATUS AWAY FROM THE ORGANISM.**—Although the wonderful experiments of Prof. Carrel, of the Rockefeller Institute in New York, have certainly been recorded in the medical papers of America, perhaps few veterinarians have read of them. An opportunity was given to me to hear Prof. Pozzi reading a communication before the Academie de Medicine. From it I make the following extract:

Prof. Carrel has demonstrated that conjunctive tissue can be kept out of the organism in a prolonged state of manifest life and that a piece of a heart beat in a normal condition more than a hundred days after its removal from the body of a chicken embryo.

Since Prof. Carrel has tried to establish a technic which would permit of a whole system of organs living outside the organism in an autonomous manner. This technic consists simply in removing aseptically in one single mass the thoracic and abdominal organs of an animal, generally a cat, and in conserving them under certain conditions.

The skin of the neck, thorax and abdomen of an anesthetized cat is sterilized. The oesophagus is tied and cut aseptically. In

the divided trachea, intubated, a rubber probang is introduced to permit artificial respiration, according to the method of Meltzer and Auer. The abdomen is opened; the aorta and vena cava are ligated and cut near their bifurcation. The small intestine is divided aseptically; also the ureters. Then ligatures are applied upon the posterior branches of the aorta and vena cava, which are cut, and the abdominal viscera is completely isolated from the abdominal wall. The parts remain attached to the body only by a peduncle made of the aorta and vena cava. Then the thoracic cavity is open.

The diaphragm is separated from the costal wall. The innominate arteries, anterior vena cava and vena azygos are ligated and cut. The animal dies. The pneumogastric, sympathetic and phrenic nerves are cut.

The posterior branches of the thoracic aorta are also divided. At that moment the pulsations of the heart are generally weak, and the arterial pressure is very low.

\* \* \*

Then as a single mass are extirpated from the cadaver of the animal the thoracic and abdominal viscera, united by their blood vessels, and they are placed in a basin containing Ringer's solution at the temperature of 38 degrees C. Generally the heart still beats slowly and regularly. But the pressure of the blood is low, the cardiac pulsations weak and the organs have a very anemic aspect. After a few minutes the pressure of the blood rises and at times returns almost to normal.

In general a certain quantity of blood from another cat is transfused in the visceral organism. Then the lungs become rosy, the blood pressure goes up, the heart beats regularly between 120 to 150 a minute.

The pulsations of the abdominal aorta are very strong. Those of the arteries of the stomach, spleen, kidneys and even of the ovaries are seen pulsating. The peristaltic contractions of the stomach and intestines are observed. The appearance of the viscera has resumed a normal aspect.

The visceral organism is then placed in a box filled with Ringer's solution, covered with thin Japanese silk and protected with a plate of glass.

The tracheal tube is fixed to an opening made on one of the walls of the box. A tube is fixed to the oesophagus, permitting the injection in the stomach of water or food. The intestines are drawn out of the box through a special tube, and an artificial anus is established. The box is then placed in an autoclave at the temperature of 38 degrees C.

\* \* \*

In those conditions the viscera live in an apparently normal state. The cardiac pulsations are strong and regular. The circulation of the organs is normal. The intestines show their peristaltic contractions and empty themselves by the artificial anus. When the intestines are empty, bile and intestinal mucus are evacuated. In one experiment, when the stomach was full of meat at the time of death, a normal digestion took place during the hours following.

Some visceral organs died almost suddenly after three or four hours. But most of them live quite actively, ten, eleven and even thirteen hours after the death of the animal from which they were taken. The death of these organisms was indicated by irregularities in the heart's pulsations, which become also weaker; then the heart stopped suddenly.

According to Prof. Carrel, it is probable that the duration of the life of the visceral organisms could be increased with some modifications in the technic. But it is already sufficient for the study of numerous problems of physiology and chemical biology.

Surely, other physiologists have already succeeded in keeping for a certain length of time entire organs, alive and in functions, outside of the organism; but this result was obtained with artificial means; that is, with circulation kept up artificially or by perfusion of defibrinated blood, serum or fluid of Locke.

One of the first principal points in the experiments of Carrel is that the life is kept up by the natural circulation with the blood

of the animal itself, which is oxygenated in the lungs and sent to the tissues by its own heart.

A second point worth noticing is that it is not only the *survie* of one isolated organ, but that of a series of organs, or of the totality of a splanchnic apparatus. Finally the duration, truly unexpected of this associated life of various organs isolated from the body and the central nervous system by a kind of decortication, offers a superior interest to demonstrate the independence of vegetative life from that of relation.

\* \* \*

LIFE OF THE HEAD SEPARATED FROM THE BODY.—The *Journal de Physiologie et de Pathologie Generale* contains a *compte rendu* of experiments carried out by Drs. de Somer and Heymans, which are of valuable importance at this moment, when the wonderful results of Prof. Carrel are yet fresh in the memory of all. This *compte rendu* refers to a new method to preserve in a state of *survie* the heads of mammals isolated from their body. These authors held for a long time, two hours and even more, in a state of prolonged life the heads of dogs, cats and rabbits. This result was obtained in having the central end of the carotid and jugular of a dog of large size united mouth to mouth with the peripheric end of the same vessels of a smaller dog. The blood has been previously rendered incoagulable by injection of peptone. The crossing circulation once established between the head of the small dog and the large-size animal, the neck can be amputated. The isolated head then presents all the series of phenomena of prolonged life—spontaneous movements are observed of regurgitation, deglutition, opening of the mouth.

The reflexes are present as normally: corneal, pupillar, etc. If the animal is called, his ears are raised, his eyes moved. In short, there is persistency of the sensitive, spontaneous, motrice, co-ordinated and reflexed functions. These vital manifestations, after a duration which varies at least two hours, barring accident, diminish and disappear. This arrest of the phenomena of *survie* is under the dependency of the troubles of the circulation and par-

ticularly the formation of clots of blood. Anyhow, these troubles must have a certain duration, as the circulation can be arrested for a certain time without giving rise to irremediable sequelae. The reflexes which had disappeared return; death, however, occurs in the dog when the arrest has lasted two minutes.

These experiments of de Somer and Heymans show the possibility of prolonged preservation in *survie* of the head isolated from some mammalia and give an experimental means which will facilitate the studies of cerebral physiology and pathology.

\* \* \*

STRYCHNIA IN INTENSIVE DOSES.—This alkaloid is a remarkable drug, which deserves to occupy one of the first places in the therapeutic arsenal. Indeed, it is the nervous tonic par excellence, and none can be compared with it, says Dr. Hartenberg in the *Presse Medicale*. It seems to have an elective action upon the nervous cells, of which it stimulates the depressed nutrition and the diminished activity. It truly represents the specific indication for all nervous insufficiency.

And this action of strychnia upon the nervous system is really a tonic and not an exciting action—two modes of influence that differ from each other. As exciting action, we can conceive that which, putting rapidly in liberty the latent energy contained in cells, permits an immediate supplementary effort. But this exaggerated liberty in the energy is naturally accompanied with deperdition of excessive force, and then the accomplished work is followed by a period of exhaustion.

But the tonic action is that which strengthens the cell without exciting it. It stimulates the nutrition, accelerates the metabolism, incites the elements to draw more from the blood the substances that nourish it. But it does not give rise to an immediate freedom of the energy; hence no excess, no squandering of strength. In two words, it strengthens without irritating. This tonic action upon the nervous cell results in a certain number of physiological effects which therapeutics can derive profit from.

It strengthens the nervous centers, stimulates their proper

nutrition, raises their potential, increases their functional activity and their capacity to work. Besides this tonic action is accompanied with a regulating and co-ordinating action, which is manifested in the reflex and the voluntary motions. Again by the intermediate of the motor neurones, strychnia has an influence upon the muscular nutrition, of which it stimulates the generation, raises the tone and increases the power of contractions.

Finally on account of the power that the nervous system has over an entire organism, it acts in an indirect manner in stimulating all the functions and all the organs. It is a powerful general tonic.

And yet with all the precious therapeutic properties of strychnia, it has not yet to this date obtained the reputation that it deserves. Its advantages, its indications and mode of administration are not sufficiently known. To obtain all the benefits that can be derived from strychnia, it must first of all be administered in sufficient doses; if in some cases small doses, kept up for a long time, are to be preferred, most generally energetic doses are indicated.

The method of intensive doses is divided by Dr. Hartenberg under four principal headings:

1. **STRYCHNIA MUST BE GIVEN IN LARGE DOSES.** The ordinary doses are insufficient. To obtain all the effects of a drug, it must be given in maximum doses. What is this strychnia? It varies according to subjects and is indicated by the apparition of the physiological reaction, viz., the first manifestation—vertigo, stiffness of the jaws, of the legs, etc.

2. **IT MUST BE GIVEN IN PROGRESSIVE DOSES.** Becoming accustomed to the drug is quite rapid. There is no accumulation of the drug, but the organism gets used to it quite fast, and a same given dose, which would promote a reaction, stops producing it after two or three days. Therefore a progressive increase is to be given, so as to obtain always the physiological action.

3. **SULPHATE OF STRYCHNIA** must be given in preference. The other salts, arseniate, phosphate, cacodylate, formiate do not possess the same value.



4. HYPODERMIC INJECTIONS are the way to administer it. The action is more rapid and more energetic.

In following these rules, as high as 2 and 3 centigrams have been given in intensive treatment of some diseases without any bad effect. Employed according to the progressive method, strychnia presents no danger.

Certainly if this finds advocates, it will upset all the therapeutics of the diseases for which strychnia has been employed so long in such reduced doses.

\* \* \*

BIBLIOGRAPHIC ACTUALITY.—*Regional Anatomy of the Domestic Animals (Horse)*; by Professors L. Montane, of Toulouse, and E. Bourdelle, of Alfort.

Those, few as they may be, who, like me, began 60 years ago their studies of anatomy with the excellent work of Rigot and Lavocat, and who about forty years since have seen the magistral efforts of Chauveau, soon followed by the serial additions where are found the names of Arloing and Lesbre, will wonder to-day when will the literature of the fundamental branch of veterinary education stop progressing, while they have before them the *Anatomy of Regions* that the professors of anatomy of the two French veterinary schools have just published through that old house of J. B. Bailliere and Sons, of Paris.

Was there need for a new work on anatomy, will some exclaim? Were we not fully satisfied with our good old book of Chauveau, translated in almost every language, the text-book of nearly all the veterinary colleges, and whose method has been conformed to the classical and traditional teaching for years?

In their preface the authors of *Regional Anatomy* answer: "Chauveau's cannot be imitated; but perhaps his method is susceptible of modifications and changes which would make it better adapted to the necessities of medical practice."

"This method, which consists in dividing the body in as many apparatus as there are great functions and in studying in each apparatus the series of organs that constitute it, is derived

from the physiological conception of the body of animals. . . . It imposes itself in the domain of pure science . . . but is less *fécond* when applied to the realities of the medical profession, and is then open to the reproach that it separates contiguous organs, functioning together to accomplish the same act and reacting one on the other in various pathological manifestations."

"Anatomy taught in medical schools must be free, as much as possible, of its disinterested and speculative character, so as to prepare students to the understanding of pathological facts and to make them careful practitioners and skillful surgeons."

"And it is in being grouped in one region of the body that organs must be consulted by the clinician, who is trying to make a diagnosis, or by the surgeon in the presence of a complicated field of operations, or also of the meat inspector, who has to decide as to the nature and origin of a piece of meat."

"It has seemed to us that anatomical facts would gain, if presented to the student, such as they must remain in the mind of the practitioner—nerves along the blood vessels, those along the muscles, those along the bones, etc.—in other words, such as reality shows them under the scalpel of the dissecting student or the bistouri of the surgeon. . . ."

The idea of a work realizing those conditions was born. It was a severe and difficult task. Professors Montane and Bourdelle have accomplished it and did it well!!

For a long time works on topographical anatomy, added to books on descriptive anatomy, have existed in human medicine; but in veterinary, notwithstanding the attempts made by Ellenberger and Baum in Germany, Mongiardino in Italy, Rubay in Belgium, McFadyean in England, it can be said that the work of the French authors certainly comes to fill a wanted need, and it does it as it should be!!

\* \* \*

THE REGIONAL ANATOMY OF THE HORSE is the object of the book before me; that of the other domestic animals will follow later on. The one on the horse is divided in two distinct parts.

The first part embraces three sections which relate to generalities on the various apparatuses, to the central nervous system and to some general technic of dissections.

In the generalities upon the various apparatus there are considered all the notions of general descriptive anatomy and those which are necessary to understand the great segments of the body and of the organs that belong to them. A concise glance in the histological structure of the connective tissue and of the various membranes is also a part of this first section.

The central nervous system is the object of a special chapter, as it has seemed impossible to divide into subsections according to regions an apparatus of that importance. To this consideration of the nervous system there are added those of the organs of senses.

Finally remarks on the general technic of dissections are occupying the third section of this first part, dissection being considered as the only means of anatomical investigation in general and of *Regional Anatomy* in particular.

The second part of the book treats of the *Regional Anatomy proper*.

For each species of animals the body shall be divided in regions, which will, as much as possible, correspond to those described on the external forms of the animal; viz., the head, neck, thorax, thoracic extremity, abdominal cavity and hind leg. In each region the organs will be examined synthetically by layers and by subregions, according to the various steps of dissection. While waiting for the proposed nomenclature of muscles, the authors have designated those organs by three names: (1) That by which the muscle is generally known; (2) the Latin name proposed at the international congress of Baden, in 1899; (3) the name given by the attachments of the muscle.

\* \* \*

The first volume of *Regional Anatomy of the Domestic Animals* forms an enormous book of 1,069 pages, printed on beautiful paper and with type very easy to read. The description is

excellent, concise, as much as is needed, and the text beautifully illustrated by 504 black and colored plates, which add a most remarkable value to the book.

The preparation and presentation of this wide anatomical volume is the work of the personal efforts of the two professors and of a young artist, Mr. Biscons. The initials that are signed to many of the plates are a revelation of a talent which we feel sure has been put to contribution in the lectures delivered by those two professors of anatomy. A schematic drawing on the black board being of great value and leaving on the student's mind a lasting impression. Besides the beautiful aquarelles, representations that refer to the various portions of the work, there are also presented transversal colored sections of all the regions of the body and of the extremities, which are models in their correctness and deserve the special attention of the meat inspector as well as of the surgeon. Each illustration has on its margin all the indications and names relating to it. It seems to me that this innovation will not give to the plate all the good that is expected. The explanatory names had to be written in too extremely fine type; they are too crowded and, I think, will interfere with the general examination and full comprehension of the large quantity of material that it represents. The worthy professors will, I hope, pardon this mild observation, which is not presented as a criticism; the book is above any.

This review of *Regional Anatomy* would be incomplete if compliments were not also addressed to the publishers. MM. Bailliere have made of the work trusted to their hands not only a valuable scientific book, but also one of luxurious appearance, which will always deserve a good place in any library.

The success of *Regional Anatomy* is certain. It will grow greater and greater, as it is known, and we feel sure that it will repay our worthy *confreres* for their efforts for having given the profession the result of many years of enormous, careful and serious work. Price, 32 francs.

\* \* \*

BIBLIOGRAPHIC ACKNOWLEDGMENTS.—Bureau of Animal Industry. Circular 205. *Milk and Cream Contests*. How to conduct them and how to prepare samples for competition. By Ernest Kelly. Circular 207. *Directions for Constructing Vats and Dipping Cattle to Destroy Ticks*. By H. W. Graybill, D.V.M., and W. P. Ellenberger, D.V.S.

*Country Review*. (Baton Rouge, La.) A series containing contributions on sheep industry, by our esteemed collaborator Dr. Dalrymple. Also a call for more sanitary veterinarians in Louisiana and a report of the committee to obtain "More Federal Assistance for Tick Eradication in the South," the committee counting among its members several state veterinarians, Dr. C. A. Cary of Alabama, W. G. Chrisman of North Carolina, C. P. Dawson of Florida, George R. White of Tennessee, Peter F. Bahnsen of Georgia, D. F. Stanford of Arkansas and W. H. Dalrymple of Louisiana.

A. L.

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#### FIFTIETH ANNIVERSARY A. V. M. A.

This important event in the history of veterinary medicine in America is fast approaching; only four months lie between the present and the sounding of the gavel on the morning of the opening day which is to mark the half century point in the activities of the greatest veterinary organization probably in the world. The eastern members, however, are keenly aware of the brevity of the intervening period, and of the rapidity with which summer months seem to "melt" away, and are actively engaged in preparing a welcome for their brothers and friends from the other points of the compass, in keeping with the importance of the occasion, both from the scientific and the social viewpoints. So that those who attend the Golden Anniversary of the A. V. M. A. will not only be impressed with profound meaning of such an occasion and with the realization of the unusual privilege which they are enjoying in participating in it, but will also be afforded opportunities of getting a fair idea of the

American metropolis, its great buildings, theatres, public institutions, museums of art and natural history and other educational institutions, its parks and pleasure places. Those from the inland states will especially appreciate a sea-side dinner and a dip in the surf. These and many, many other things that their eastern brothers are planning for the ladies and gentlemen who attend the convention of the American Veterinary Medical Association in New York the first week in September.

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#### TENTH INTERNATIONAL VETERINARY CONGRESS IN LONDON.

The Tenth International Veterinary Congress, London, August 3 to 8, 1914, seems a long way off as compared with our approaching national convention, but it is sufficiently near hand to cause the members of the National Committee, that is to represent this country at that congress, to begin to concentrate their minds upon the work that the distinction of such membership involves; a distinction won by a record of things accomplished; and what a splendid representation we have, with Prof L. Van Es, of the North Dakota Agricultural College, as chairman, and Dr. Adolph Eichhorn, Senior Bacteriologist of the Pathological Division of the Bureau of Animal Industry, as secretary, as reference to page 196 of the present number will show, including many of the leading scientists in the veterinary profession of the United States. But the committee cannot do the country full justice without the aid and co-operation of the profession at large, who must strengthen its hands in every way possible; all that possibly can, even by lending their presence to the occasion, so that the committee from the United States may approach the Tenth International Veterinary Congress in London in 1914 not only thoroughly equipped with scientific facts, but surrounded by the largest delegation of enthusiastic veterinarians of any country represented. It is not a moment too soon to engender such enthusiasm, the spark of which is laid in Secretary Eich-



horn's correspondence, including Chairman Van Es' list of the general meetings on page 197.

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### THE REFORM OF THE ARMY VETERINARY SERVICE.

It has been tritely said that the only way to reform the army veterinary service is to reform it. A veterinarian in the central west, than whom there is none more gifted and none more possessed of the spirit of disinterested leadership, who said recently that he for a long time thought we must wait until opposers of reform for the army veterinary service die and then push forward the movement, confesses himself converted. He sees that the issue must, like all reforms, be fought through on the floor of Congress. These are the days when the meanness of concocting legislation behind closed doors, for the benefit of favorites in manufacture or trade, has been exposed. They are the days of fighting out all legislative questions, worth discussion, in the open. If this reform is necessary, as we believe it is, let it see the light of day; let its meaning be known to a Congress which almost defies the word progressiveism. Are men sent to represent us in Congress to serve us; or are they sent to lord it over us? The conviction is fixed within the mind of every man in the profession that the army veterinary service must be reformed. Where is the man who has read his REVIEW a single year during the last twenty who does not know this? We have fought for this reform, as we have fought for every worthy reform before the profession, and attempted to elucidate every prominent problem confronting it, since the foundation of this publication. The present Congress is closer to the people than any during two decades. We must carry this army veterinary service reform through it, now that opportunity offers. The last Congress was at loggerheads with the War Department and was barren of legislative advantage for us. A new way is open; a new road is before us; will we follow its course?

D. A. H.

## ORIGINAL ARTICLES.

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### FLEXOR TENOTOMY.\*

BY DR. J. W. VANSANT, FOX CHASE, PA.

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The causes of inflammation of the flexor tendons that have come under my observation have in nearly all of the cases been strains.

This seems contrary to Moller, who seems to think a great many follow some infectious disease, as influenza, pneumonia, etc., and that the inflammation is due to metastatic infection to the tendon sheaths. There is surely a certain type of horse that is most liable to this trouble. He is that strong, well-muscled, compact horse that is built for strength. He also has lots of snap and energy.

You only need to look at that large, clear eye to tell you that he is always ready to do his share of the work, and he generally does more.

Of course the horse that has the tied in condition under the knees is more likely to suffer from strains than the better anatomically built one.

Long, sloping pasterns are very likely to suffer from inflammation of the tendons, but we seldom get the excessive contraction in this animal that would call for the operation, because he generally gets sore in both legs and does not rest either one of them enough to let the tendons contract very much.

The animal with the determination that his load must come, makes a misstep, or, by his own muscular strength, ruptures some of the little fibres that go to make up the tendons and causes inflammation to set in.

This may be quite severe and get immediate treatment; but

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\* Read before the Keystone Veterinary Medical Association.

generally the horse comes out a little sore the next morning and soon works out of it, and we are not called.

This tendon once weakened is now much more liable to subsequent strain.

The animal will generally rest this leg, which gives the tendons a chance to shorten, or in a large number of cases he gets too lame to work, is turned out or let stand in a stall.

By this time the horse will rest the leg almost continually, and the contraction is quite rapid. The consequence is that he will soon have to be killed or operated upon. This contraction is due to the tendency of all new formed tissue to contract. Repair has set in and built up new tissue at the point of trouble, and if this horse was made to take proper exercise he would keep the tendons stretched out to the proper length, or nearly so. It is remarkable what contraction we get in some cases and with so little apparent change in these tendons. This may be due to contraction of the check tendon, where it is more difficult to locate. Or we may have a shortening of the whole tendon and muscular part as well. We often see these cases where there is a severe trouble anywhere in the leg that prevents the animal through pain or other causes from putting the proper amount of weight on the leg.

We may see this especially in growing animals. Neglect in the trimming of the hoofs properly may be accountable for injury to the tendons, as long toes and too low heels.

Long toes throw a powerful strain on the flexor tendons during the latter phase of movement, just before the limb is lifted from the ground.

We may get passive strains when the horse is pulled up quickly, jumping, or when one leg is thrown out to catch his weight when he stumbles. The part then most likely to get injured is the check tendon of the perforans (or the deep flexor) or the suspensory ligament.

Lameness from inflammation of the flexor tendons varies according to severity and position of inflamed parts. Inflammation of the perforatus may only cause slight lameness, as also

may trouble in the suspensory ligament. After severe work, the inflammation is considerably increased, and we have marked lameness, but they will rest out of it better than when the perforans tendon is involved. We usually get but one branch of the suspensory ligament inflamed, but we may get both. I have seen more race horses with trouble in the suspensory ligament than the heavier horse. The cause here is the passive sprains, or taking the weight quickly going at high speed. The perforans tendon is very commonly the seat of trouble and in this case is due to active sprains of its muscular power.

We may, I think, always find the trouble when due to these tendons; they are more or less swollen and always tender to pressure when there is lameness. The horse's gait is shortened, especially the last half of the phase of contact, because there is pulling on the tendon at this time. The whole leg from knee down may be straightened, or we may get the hoof only to become upright. The heel soon grows quite long and the toes shortened. If there is severe lameness, the horse will never put entire weight on the limb as we often see in other lamenesses of the leg. This of course accounts for the contraction of the tendons by not getting proper weight on them. Contraction of the perforans and suspensory ligament only affects the obliquity of the pastern, the hoof remaining in a normal position. We may best examine the structure by having some one hold up the opposite foot. I remember one case where there was excessive contraction of the suspensory ligament only, and with forced weight on the diseased foot, I could move the flexor tendons considerably, they taking no weight on at all. An operation in a case of this kind would certainly be useless.

Contraction of the perforans produces volar flexion in all of the phalangeal joints. It is hard to give a prognosis in these cases, although, if the proper care of them was carried out carefully, I believe we would be able to tell quite well the outcome of the case. When there is very much swelling, the inflammation spreads to the surrounding tissues, and the tendons are grown fast to bone, or one another, or even both. The veins and arteries

may be imbedded entirely in this white, fibrous tissue. If there is very much pain and the horse continually holds the foot in volar flexion, contraction will be very rapid, unless he is made to use the leg considerably. The treatment of these sprains depends on the severity and extent of the condition—also the amount of pain. If we have a very acute case where there is much swelling, I would first use antiphlogistine under a little pressure. After a few days of this, would apply a good blister, followed by another if the lameness keeps up. We must give the horse exercise of some kind to keep the tendons stretched to as near the proper length as possible. At this stage we need plenty of massage, and I have used iodine petrogen considerably. This can be rubbed in well and is a very good absorbent. We may get our horse in fairly good condition, and then comes the great bugaboo. Our horse is put back to its usual work. It has had somewhat of a rest and goes after its work with considerable vim and is liable to a resprain. The once weakened tendon seldom gets as strong as it previously was. This is not always the case though, as I have seen them work on indefinitely. With each attack the fetlock and phalangeal joints straighten until they begin to roll over in volar flexion. Once it reaches this stage it is only a short time that he will be able to work, and he either must be killed or operated on. When the foot gets straight, and especially when it rolls over on the anterior wall of the hoof, there is a great sprain on the capsular ligament of the anterior part of the phalangeal bones. This very soon sets up periostitis with the formation of a ringbone.

The operation of flexor tenotomy, I believe, is the most neglected of any operation that I know of. I remember when a boy seeing a horse killed that probably could have been made worth \$150 and that to-day would bring \$250. I think that 60, yes 75 per cent. of operable cases can be made serviceably sound, and that 15 to 25 per cent. of the remaining ones will work for years and pay for the operation several times over.

You may ask, which are the operable cases? Well, all of those where the change in the joints is not too great, or where

the tendons are not grown to their surrounding structures so strongly that they cannot be broken down by force after the flexor tendons have been cut. If the suspensory ligament is too much contracted, we will not be able to get the fetlock back into its proper position. I have operated on cases where there was considerable contraction of the suspensory ligament and where there was a good-sized ringbone. Where it took a week's work to break down the adhesions of the tendon and to stretch the suspensory ligament sufficiently to let the hoof and fetlock back into its proper place, and had them to do good service afterwards. In fact, I always like to have the fetlock fall a little lower than normal, so that I can allow for a little contraction of the new cicatricial tissue that must fill in between the cut ends of the tendons. The operation is very simple. In nearly every case we may do it standing and have frequently done it without the horse moving at all. I use stovaine as a local anesthetic, and if I have reason to believe the horse may be a little nervous or particularly afraid of his leg from former blistering or firings, I give him one ounce of chloral hydrate in a drench. The hoof is trimmed down, so that the heel is not quite as low as the normal foot. The leg is clipped and washed thoroughly with one or two antiseptics, or better if we have a bichloride dressing on it for twenty-four hours beforehand. The foot is placed on a strong box, block or anything that is about sixteen or eighteen inches high, with a rope around the hoof, with an assistant with one hand on the knee and the other holding the rope. I then run a small, sharp-pointed knife between the two flexor tendons, with the cutting edge toward the knee and a little below midway between knee and fetlock, starting from the inside on the front leg and the outside of the hind leg, until I can feel the point of the knife on the opposite side of the leg. Withdraw the knife and insert the blunt-pointed tenatone in the same tract until you can feel it under skin on opposite side. Now, turn the cutting edge toward the perforans, and while the assistant is pulling on the rope and pushing back on the knee to cause tension, we cut through it from behind forwards. If there is not very much thickening around



it, we will easily know when we have it cut through. If there is very much thickening will cut through the bulk of it, being careful not to cut the artery or large veins. Never use any pressure on skin over artery while cutting. Then turn the cutting edge on the flexor perforatus, and we very seldom have any trouble in cutting this one. By feeling with the thumb and finger we can determine if we have cut all of the tendon or just where it is that still holds them. Mostly we will feel the foot give at once and will know that we have cut all of both tendons. We will now apply a pad of cotton soaked with bichloride and a derby bandage soaked in the same. Walk the horse a little way to see how he comes down. Now comes the principal part if we are to have success. We must so regulate the foot that the fetlock will come down to normal or a little below. If it does not come down enough, we may rasp the heel shorter, taking it down as low as possible and leaving as long a toe as possible. If this does not bring it down with proper exercise, we will have to use a shoe that extends out in front a couple of inches. We may have to use quite a little force also to get it low enough. If on the other hand it may come down too far, we will have to use a shoe extended out behind and encourage him to lie down as much as possible. The bandage may be left on from four to six days, unless we have cut some of the blood vessels, in which case it will need to be removed before and redressed. We usually get healing by first intention, but when we get an infection we may have a good deal of trouble with it.

After we have the wound healed, we may use a light liniment for a couple of weeks, and if there is much swelling or considerable lameness at this time we may blister the part. They may go to work in from four to seven weeks. It is essential to start them to light work, so as to stretch this new formed tissue, as it will take on a tendon-like formation, and to keep the foot at the proper angle.

We should be very careful not to pull the horse too hard or do anything that is likely to set up acute inflammation in the part again for a couple of months.

The cases that I have operated upon have been about 62 per cent. geldings and 38 per cent. mares.  $36\frac{3}{4}$  per cent. were gray horses. Front legs: Right front, 58 per cent.; left front, 42 per cent. Hind legs: Right hind, 53 per cent.; left hind, 47 per cent.

I think the reason that there is much less trouble of this kind in the hind leg is that it is better anatomically built to lessen the sudden jolts that cause the passive sprains, and to withstand the active sprains. Draft type, 78 per cent.; general purpose, 15 per cent.; mules, 4 per cent.; trotting type, 3 per cent..

In sixty-one cases both the perforans and perforatus were cut. Seven cases where only the perforans were cut. I know now that I have gotten bad results in some cases where I cut both and believe that it would have been different if I had only cut the deep flexor. In one case I only cut the perforatus and then had to cut the perforans afterwards.

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ALUMNI OF THE NEW YORK-AMERICAN VETERINARY COLLEGE, ATTENTION! If you have mislaid the notice received from the secretary of the alumni association relative to the meeting and banquet to be held at the New York Athletic Club, 58 West 59th street, corner of Sixth avenue, on Thursday evening, May 8, this is to remind you of the date and place, and to impress upon you that you cannot afford to miss *this particular dinner* of all others, as it is to have some especially interesting features, this being a jubilee year for American veterinarians generally. Noted men outside of the veterinary profession will make interesting addresses on subjects of interest to veterinarians. Remember the place, New York Athletic Club. That in itself should bring you. For particulars write Dr. H. D. Gill, chairman, Dinner Committee, 337 East 57th street.

REVIEW NOT RUNNING BACK.—An Illinois brother says: "Enclosed find my subscription to the AMERICAN VETERINARY REVIEW for the year 1913. I appreciate improvement in its columns with each succeeding year."

## METHOD OF USING ANTI-HOG CHOLERA SERUM.\*

BY DR. D. E. BAUGHMAN, FT. DODGE, IA.

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A short time ago our secretary asked me to write a paper upon the method of using anti-hog cholera serum. In order to properly understand the method of using this serum, it would be well to first take up the method of its manufacture. In order to make the potent serum that has the power to protect a hog against cholera, it is necessary to have cholera pigs from which to draw the blood. The younger the diseased pig that the blood is taken from, and the more acute the strain, the more virulent the blood will be, and the more virulent the blood is that is used for hyper-immunizing, the more potent will be the serum.

It is impossible to make a potent and reliable serum where pigs are used to furnish virulent blood, with unknown form and virulency of disease, as is done with some of the serum firms that depend entirely upon the supply of their diseased pigs from the markets or large packing plants. Although this method has its advantage, in that this diseased blood can be had for a small sum, if they pay for them at all. These plants can make serum and sell it for much less than where it is made by the original method, as was intended by its inventors. But in order to make serum that is really potent and that will protect a hog from cholera, it is necessary that the strain of disease be bred up to the highest point of virulency.

This can be done much as corn is bred up. In breeding corn the farmer picks the best ears he can find for planting; he looks for a large ear, with the right color, straight rows, deep kernels, well filled at the end, one that is well matured. So it is with the disease under the intended Dorset and Niles method. First, you use pigs that you know are susceptible, for you should know

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\* Presented to the Twenty-fifth Annual Meeting of the Iowa Veterinary Association, at Ames, November, 1912. Reprinted from published report.

their source; then you use blood from the most virulent strain for starting the disease; for instance, when you kill six or eight a day, you use the blood for starting from the pig that has the disease in the most acute form, one that comes down in the shortest period of time, and the one that shows the best lesions. If they come down in seven or eight days, all the better; but if they come down in thirteen or fourteen days, the blood should not be used for hyper-immunizing. A pig from four to six months old will produce blood of a more virulent strain than one that is ten or twelve months old. The older pigs seem to acquire more or less natural immunity; therefore it is best to use younger pigs for this purpose.

This method was only discovered a few years ago by Drs. Dorset and Niles, of the bureau. At first it was looked upon with considerable suspicion, even by the veterinary profession; and very few gave it much thought and study. Only in the last two or three years have the veterinarians realized its value and the importance of this branch of veterinary practice. To have the best success in using serum, it is absolutely necessary that a man take the temperature of all the hogs that one expects to vaccinate, even when you do not expect any infection in the herd.

I have known a number of cases where the veterinarian was called in, and although the herd was not expected to be diseased, yet upon examination they have been found to have a very high temperature. If these hogs had been vaccinated by the simultaneous method under these conditions the results would have been bad, as the farmer would have claimed that the infection was started by the vaccination. Where you take the temperature in these herds, you will find that some of them had temperatures running from 104 to 106 degrees F. There is no doubt that some of these cases where the simultaneous method was used in a supposed healthy herd, and where cholera followed, that the infection was in the herd at the time of vaccination; with the precaution of taking the temperatures, it would have relieved the veterinarian of this embarrassing position and also maintained the reputation of the serum.

Where a herd is already infected, temperatures should be taken, as before stated. Each hog with a normal temperature should be marked with one mark, with a scissor across the back; but where the temperature is above 104, one should place two marks. These marks made with a scissor will last for three or four weeks, which will enable the farmer to keep track of those that were already diseased.

The temperature of a hog varies much, and one should be guided by the condition under which the temperatures are taken. In warm weather the temperature may run up to 105, and yet the hog be in normal and healthy condition, and also if they are considerably exercised, the temperature will rise to what would seem abnormally high. Therefore the temperatures under these conditions should not be confounded with a diseased condition that you find in cholera. Whenever it is possible, the hog should be confined in a close quarter, and the temperature taken standing. Where you catch each pig and lay them down to take the temperature, it causes considerable excitement, which, with the exercise it would cause while catching them, would without a doubt raise the temperature. It is well to use a thermometer with a good-sized bulb, one after being well vaselined could be easily used without causing an irritation of the mucous membrane of the rectum.

One of the most important things to find out in vaccinating a diseased herd is to be sure that the existing disease really is cholera. That can usually be done by holding post mortem, but in some cases one or two post mortems may not reveal cholera lesions. In this case you must guard yourself in giving your prognosis, for anti-hog cholera serum will not prevent any other disease than cholera. In simultaneous vaccination you usually get a more or less reaction; pigs thus treated may be able to transmit the disease to susceptible or non-immune hogs, and in this way it may spread the infection or start new centers of infection. So it is a question as to whether it is advisable to use this method or not. In seasons when cholera is prevalent, and especially if the disease has broken out in your immediate neighborhood, then

the question of starting new infectious centers is not so important.

Cleanliness throughout the whole operation is very essential in administering serum to reduce the danger of septicaemia and abscess formation. Your syringe should be taken apart; your needles and vessels for using serum should be sterilized by being boiled in water. If you are using a syringe with a rubber plunger, the plunger should be disinfected with a 5 per cent. solution of phenol or some disinfectant that will not deteriorate the rubber. The operator's hands should be well cleaned and kept clean throughout the entire operation. He should not attempt to catch any pigs or touch anything with his hands, except the syringe. There should be plenty of assistance to do this part of the work. The operator should have plenty of clean, warm water at hand. He should have two men to catch the hogs, one man to wash and disinfect the skin at the point of injection, and he should have two glass vessels with metallic covers to prevent the wind from blowing dust and dirt into them. The syringe best adapted for vaccination is a 20 or 30 cc. with a glass barrel, and it should be tested with warm water before used to see that it is in good working order; 20 cc. of serum is about all that should be injected into one place; and I think it might be better to only inject 10 cc. in one place, by partly withdrawing the needle and inserting into another direction.

In this way you would need to make but one puncture, lessening the danger of infection. I would advise either one of two locations to inject the serum: one is the auxiliary space between the front legs, and the other on the inside of the thighs between the hind legs. I do not think it is necessary to inject deep into the muscles. Absorption takes place just as readily where it is injected under the skin into the subcutaneous tissue, and in this way you will not have so much lameness as where injections are made deep into the muscles. By this deep method of injecting it leaves a bad spot in the ham; this the packers object to, as the government inspectors compel them to cut out these blemished spots, which cause quite a waste to the expensive part of the meat.

It has been the custom of some veterinarians to vaccinate old



hogs back of the ears by placing a rope noose or loop around the upper jaw, back of their tusks, then fastening the other end of the rope to some strong object. They will lay their entire weight back against the rope, but will not struggle much. This is a very easy way of handling pregnant sows, which is its chief advantage.

After having your hogs confined in this manner, they will be very easily vaccinated behind the ear in the loose skin. This location, however, should be more thoroughly washed and cleansed than where the injection is made under the belly, for at this point the skin seems to have more sebaceous glands than any other part of the body. The depression behind the ears makes it harder to get at, and I find that you will have more abscesses by injecting at this location than at any other point. I therefore only recommend this method in pregnant sows. I think where abortion follows, it is more the cause of rough handling than the effects of the serum.

I think the time is at hand when every veterinarian should lend his aid to have a national law passed requiring every serum plant to be under inspection, compelling each plant to make serum under the government instructions, giving the inspectors power to collect serum at any time from stock on hand that is ready for the market. This should be welcomed by every legitimate serum concern that aims to sell only potent serum.

Misuse of serum, as has been practiced by some veterinarians (if not corrected), will cause a reaction among the hog raisers that will discredit the serum whenever it is so used. For instance, one man would vaccinate the sick ones, as well as the well ones, and guarantee them all to live for one year; another man would vaccinate those that they knew were sick, for no other reason than to consume as much serum as possible, being paid by the cubic centimeter for their work. These veterinarians, I am glad to say, are only a small minority, yet there is considerable carelessness among veterinarians in general in regard to vaccinating only the healthy ones. In some instances farmers will insist on vaccinating everything, saying that they are paying for the serum.

and it will be their loss if they die. In such a case a veterinarian may be excused for doing it, providing he is vaccinating in a neighborhood where the farmers understand its use. But I think where one is just beginning to vaccinate in a new and skeptical neighborhood, he had better not vaccinate anything that shows sickness or has a high temperature, for the sick ones will usually die and they will count this against the serum, which will materially cut down the percentage of hogs saved; and the percentage that they save will be used as a basis to figure the profit they have obtained by vaccinating.

*Don't vaccinate hogs that are sick or show high temperature.*

*Don't vaccinate with serum alone, then put sick ones with those vaccinated, unless you can confine them all in a small space or pen, so that all will receive the infection at nearly the same time.*

*Don't pour more serum in your vessel than you will use, for pouring remnants back into the bottle is liable to contaminate the serum and endanger its use.*

*Don't pour virulent blood away if you have any left after the simultaneous method. Any remaining blood should be destroyed by fire.*

*Don't use syringe, needles or glass that has not been sterilized or disinfected.*

*Don't vaccinate infected herds, without marking those that show high temperatures. You had better take at least some temperatures in all herds.*

*Don't underestimate the weight of hogs in vaccinating. You are not liable to give too much serum, but you may give too small a dose.*

*Don't give your patrons too much encouragement when you are vaccinating infected herds.*

*Don't use the simultaneous method in an already infected herd.*

I have not aimed to give anything new, but hope that these few remarks will start discussion that will prove satisfactory to us all.

## EQUINE TYPHLITIS WITH IMPACTION.

BY WILLIS WILSON, D.V.S., DAYTON, WASH.

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As the name implies, this is a condition found in horses where the cæcum is the seat of the trouble.

It seems to be no respecter of age or sex, and in this community I have met with it in both young and old and in mares and stallions with equal frequency during the four years that I have been in practice.

I have searched through my literature in quest of something that would aid in keeping down the high percentage of mortality attending this malady, but so far have found nothing bearing upon the subject.

This apparent lack of authentic literature directly relating to typhlitis led me to believe at first that it was either rare in its occurrence or perhaps an affection of a local character. The first idea, or that of its rarity, I have long since abandoned, being obliged to treat on an average of fifteen cases a year. Whether or not it is confined to certain localities, I am at this time unable to say.

Typhlitis with its accompanying impaction, or perhaps more correctly engorgement, is not a difficult disease to diagnose; its prognosis, on the other hand, I have found to be the most uncertain of any variety of disease which we are required to treat. The reputation of the practitioner is in immediate danger during its entire course, as it is simply impossible for the average farmer to understand the severity of the disease owing in most cases to the comparatively mild symptoms the afflicted animal manifests.

Typhlitis with impaction or cæcal impaction usually begins with colic symptoms which may be exceedingly mild, the animal

merely pawing and looking toward the flank at intervals of a few minutes to two or three hours. Again there may be violent pain from the onset, which after a few hours will moderate and not again increase until a few hours before death.

The bowels are in most cases active, there being fairly normal peristaltic action audible on the left side, and there may be the normal passage of faecal matter which may be either abnormally soft, or again in some cases it retains its normal consistence. This fact naturally leads one to make a rectal exploration, and if he be blessed with a long arm, he will be rewarded by being able to palpate the caecum filled and indeed distended with a mass which may be either quite hard and resistant, or again quite pliable and capable of being readily indented.

In many cases the rectum will be found moderately filled with soft faecal matter which gives off a very offensive odor, and which is quite doughy and gummy and only removed from the hand with considerable difficulty.

The administration of a purgative results in the evacuation of the entire intestinal tract excepting the distended caecum, but there is no cessation of the pain, the animal continuing with the same symptoms as before the purgative was given. This in itself is almost pathognomonic of caecal impaction, and should a positive diagnosis not have already been made by other means, no doubt should now remain with the veterinarian as to the exact bowel that is affected.

Owing to the comparatively mild symptoms of caecal impaction, the majority of farmers are prone to neglect calling in professional services until in some cases several days have elapsed from the onset of the malady. This affords a valuable means of diagnosis for the practitioner who has had the experience afforded in a community where this disease is as common as in my practice; as the animal will present a peculiar dejected appearance which is difficult to describe other than a rather characteristic attitude.

There may be complete anorexia, or again the animal may take food with considerable relish. There is, however, a marked

tendency to avoid drinking any considerable quantity of water, and when taken, sometimes temporarily increases the distress. I recall a case where the animal partook quite heartily of a feed of grain and drank two gallons of water and was ready for the post mortem four hours later. This occurred after the animal had been in my hospital ten days, and from indications had been sick some days before being brought in. A ruptured cæcum was found upon post mortem to be the immediate cause of death.

Post mortem findings are that of a distended cæcum, somewhat inflamed, and completely filled from apex to base with impacted ingesta, but not of a hard and resistant character as that usually found in impactions of other portions of the intestinal tract, as for instance, the small colon. The cæcum is usually found ruptured, and by far the majority of the ruptures are located at its base.

The remainder of the intestines are comparatively empty and in normal condition. The cæcum is not always completely filled with the impacting mass, but such a condition is not often observed upon post mortem as will be more readily seen when discussing the prognosis. The few cases which I have posted that have died from a partially impacted cæcum contained no rupture, but evidently succumbed from exhaustion following a period of continued fasting.

I have never been able to demonstrate the presence of a verminous embolism involving the blood supply of the cæcum as would seem the most likely cause of this peculiar disease. Indeed I consider this community quite free from infestation with the *Strongylus Armatus*, the embryos of which so frequently produce aneurisms in the arteries of horses.

The diagnosis of cæcal impaction as has already been related, is not difficult. The mild colicky symptoms together with a history of the animal having been unduly loose for a few days, or maybe but for a day or two; showing an inclination to lie down a good deal stretched out, rolling, but little if indeed at all; and presenting that characteristic peculiar attitude already related should at least arouse sufficient suspicion to call for a rectal ex-

ploration. (This, I believe, should be given to any case presenting colicky symptoms before anything else at least is given, and I sometimes wonder if the lack of rectal examinations is not in some degree responsible for our literature being deficient in matter directly related to the subject at hand.) Rectal examination in all cases of cæcal impactions which I have met (and they have not been less than fifty in number), has given positive results as far as a diagnosis is concerned, and besides has aided in the prognosis as well.

The course of cæcal impaction is atypical, and may run from one week to three. One case which I recall recovered after six weeks of suffering. A brief account of this case may be of interest owing to its several peculiar aspects and its unexpected recovery. An aged grade stallion weighing perhaps 1,700 sick for two weeks before being presented for treatment. This stallion at the time of becoming sick was making regular stands during the breeding season, and was receiving the best of feed and care. Owing to the time this stallion was ailing, he of course was bruised and skinned at a good many places from lying down and throwing himself about. The consequence was that he developed large bed sores on all prominent parts, and the bursæ at the caps of the hocks and elbows became bruised and infected and in fact suppurated badly. After four weeks he became œdematous along the sternum and adomen, and the breath became foul with a considerable discharge from the nostrils, due to the absorption of toxic matter from the cæcum. About this time the cæcum commenced to empty, and it became necessary to remove him from the building on account of the foul smelling fæces which he discharged. The fæces were doughy, light gray in color, and contained shreds of mucous membrane, and were somewhat hæmorrhagic.

Two weeks more of careful feeding and nursing restored this animal to usefulness, and he has never had a recurrence of the trouble as far as I am aware. This was about three years ago.

The prognosis of typhlitis with impaction is uncertain and certainly unfavorable. Many cases recover unexpectedly after



two or three weeks, and again many die just when we are led to believe recovery is at hand. The cause of death in a very great percentage of cases is rupture either from the cæcum becoming over distended with gas, or from necrosis due to its being so long subjected to pressure from the impacted mass. It has been my experience that those cases in which the base of the cæcum is impacted to such an extent that it folds down anteriorly in the direction of the ileo-cæcal opening never recover. Again if that portion of the cæcum lying antero-inferiorly to the ileo-cæcal opening is the seat of the impaction, the base remaining free, a large percentage recover. This is no doubt due to the cæcum being more readily ruptured in the former variety of cases owing to the posterior wall being tensely stretched, while in the latter cases the cæcum remains more pliable and affords better exit of the gas that most surely must result from the fermentation of the impacted ingesta, as well as of allowing a much more ready exit of the ingesta itself. It, of course, requires a long arm and a trained touch to correctly determine this condition.

In treating cæcal impaction I have confined purgation to giving one initial dose of aloin with strychnine in tablet form together with repeated doses of raw linseed oil. During the entire time fluid extract of *nux vomica* is given in one-half ounce doses twice daily, together with occasional capsules of ammonium carbonate and chloride and capsules of turpentine. Once daily, and in some instances, once every second day, I give barium chloride in doses of two drachms per orem well diluted. In some cases I have used arecoline subcutaneously, and in some I have alternated the arecoline with the barium chloride. In no case do I give either the barium nor the arecoline until the bowels have been well loosened with the aloin and oil. I induce taking as much water as is possible, and restrict the diet to grain, bran mash, and a little hay. Of course the box is at all times well bedded.

Under this treatment I have succeeded in saving about forty per cent. of cases. If any one has something better to offer, or

or anything in addition to the above treatment, I would suggest that you deviate a little from selfish ways and make it known, as I am somewhat discouraged if not ashamed with sixty per cent. of loss in treating this apparently common affliction of the horse.

NOTE.—The REVIEW pages are open to any veterinarian or veterinarians who wish to discuss this matter further, and manuscript should reach us by the 15th of the month; not later than the 20th. It is surely worthy of discussion. [Ed.]

ENCOURAGEMENT FROM THE RIGHT QUARTER.—*Successful Eradication of Tuberculosis.* Tuberculosis has become so common in some dairy sections that owners almost despair of riding their herds of this disease. In some cases herds have been tested repeatedly and all infected animals disposed of, and still a few cases of tuberculosis are discovered in later tests.

An instance showing that determined warfare against tuberculosis is successful is furnished by the experience of R. B. Young of Winnebago County, Ia. On September 4 and 5 of this year his herd of 146 Holstein-Friesian cattle was inspected and tested for tuberculosis by Dr. John Thomsen. He found no signs whatever of any infectious or contagious disease. A year ago when the whole herd was inspected and tuberculin-tested by him, results were the same as this year.

Such freedom from tuberculosis in a large herd is unusual, and it illustrates what may be accomplished by great vigilance and due regard to sanitary measures and healthful management of the cattle.—(*Breeders' Gazette.*)

DR. D. ARTHUR HUGHES CALLED TO GALVESTON.—Dr. D. Arthur Hughes, Commissary Department, U. S. Army, received instructions from Washington on February 22 to proceed immediately to Galveston, Texas, where he assumed charge of the inspection of the fresh beef for the troops mobilized in Texas city and Galveston. Dr. Hughes' duties also include the inspection of markets from which the troops might purchase food stuffs, and the study of veterinary matters concerning the food supply of an army in the field. During the first six weeks the doctor inspected about 500,000 pounds of beef coming from the markets of Houston and Fort Worth. The army purchased nothing from the markets which, on Dr. Hughes' inspection, proved not to be up to the standard in sanitary matters. Surely the veterinarian is an important individual in the army service.

## CARE AND FEED OF THE WORK HORSE.

BY D. M. STECKEL, D.V.M., (O.S.U.), NEW YORK, N. Y.

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*A nice looking horse is the pride of its possessor and the admiration of every by-passer.*

*Regularity and cleanliness in the care and feed of a horse whether a work, driving or riding horse is very essential and these two spell "Health."*

In order that a horse shall do its full share of the work expected, it is necessary that you give him proper food, proper care and close attention at all times. The horse is unlike a machine, merely doing a certain amount of definite and automatic work: the horse is a living, breathing animal with powers to think, reason, love and hate. A horse has its peculiarities, its moods and tempers. A work horse, though not as temperamentally developed as the driving or riding horse, still knows the difference between good and bad treatment and should receive individual attention from its care-taker.

*Stable.*—The quarters or the stable should receive first consideration. This must be a comfortable place, not merely a shack for the animal's hang-out. Let the stable have plenty of light and air; it should be dry and well built. The floor of the stall should be tight and slope slightly to the rear. The partitions, too, should be tight so that one animal, who might so be inclined, will not be able to interfere with its neighbor. The feed manger should be preferably of iron, and if of wood, should have a strip of iron at the edge. This will prevent the horse from cribbing at the manger. It is not necessary that there should be a separate hay manger as the hay could be placed on the floor. In case a hay manger is preferred, this should

be placed on a level with the horse's head, otherwise the pulling of the hay from an over-head hay manger is often the cause of partial blindness and, not infrequently, coughing and diseases of the air passages due to the dust and dirt shaken out from the hay.

In making up the bed for the horse, always see that the bedding is dry and soft. If possible, place the remaining bedding from the previous night in a dry airy place, preferably in the sun, and to this should be added some fresh bedding. Rye straw makes the cleanest and best bedding for the horse. Some use peat moss. Excelsior, shavings or sawdust make very poor bedding and are also of not much value for manure. Sawdust in particular may harbor dirt and insects which would irritate the horse's skin and may cause disease. Clean out the stall every day and let the stable be well aired during the day, and do not forget to have ventilation during the night, but do not allow a straight draught coming over the animal. It is for this reason that it is preferable that a horse stand with its head toward the centre of the stable.

*Cleaning the Horse.*—When cleaning the horse it is best to do it after the horse has come in from work. A half hour's extra work spent now will be well repaid in the appearance and comfort of the animal. When the horse comes in from work in a sweated condition, let him dry out first, then brush him off with a stiff bristled brush followed by cleaning with a soft-body brush, then sponge him off with clean water and dry thoroughly. If the air is cool cover the animal with a light stable blanket. Look particularly to the cleanliness of the horse's feet. Remember the saying, "No foot, no horse." Give the legs and feet your special attention; look at the bottom of the horse's foot for any dirt, nails or other foreign matter which may accumulate in the bottom of the hoof and in the cleft between the heels. Use the hoof-knife or foot-hook to clean out all foreign matter and see whether the horse walks with a normal gait. In the morning, before taking the horse out to work, give him a brushdown and see again to its feet. Should the bottom of the foot be dry and

cracked, apply an oil-meal poultice over night; also oil the foot regularly, but do not let the oil extend above the hoof.

*Feeding.*—The feeding of the horse must be attended to with clock regularity. Always begin at the same time and with the same horse. When out doing field work and the whistle blows or the dinner bell rings, do not stay out just a little longer in order to finish some particular piece of work. The horse is intelligent and recognizes the sound, knowing that it means him as well as you, and therefore you should quickly turn in if you can possibly do so, remove the harness, give him a drink, but not an excessive amount of water, and give him his noon meal. It is best to let the horse rest for an hour or an hour and a half during dinner time. When you take the horse out to work again, let him have more water before harnessing him. Of course, in the city where through the police regulations the horse is obliged to partake of his midday feed while in its full attire of harness and bridle, the above remarks must be modified. In the evening when the horse comes in from work, give him his daily grooming, and if not overheated, he can have his evening grain ration followed by his portion of hay. It is best not to feed hay in the morning and noon, if the horse is doing very heavy work. However, if only light work is expected of him, a small amount of hay may be given during that time. For a work horse, give from 4 to 6 quarts of oats morning, noon and night and from 5 to 6 pounds of good clean (but not fresh) timothy hay morning and evening. Whenever corn makes up a part or the full ration, give the horse 1 to 2 quarts of corn and 6 to 8 quarts of oats along with the above amount of hay. Brewer's grain may be substituted for a part of the oats, giving 5 of oats, 3 of brewer's grain and 1 of corn. Bran makes a very good addition to the horse's feed. You can add from 2 to 4 pounds of bran a day to either the oats or the oats and corn or the corn alone, ration above mentioned.

The evening before a day of rest for the horse you should reduce the amount of grain by 2 or 3 pounds; also during the day or days of rest you should feed less of the grain and more



of the hay or roughage, letting the horse have some exercise during these days. One of the main causes of *azoturia*, a dreaded disease in horses which usually follows when a horse is taken out to work after one or more days of rest, is the feeding of the same ration to the animal at rest as when doing heavy work. There seems to be some accumulation of a poisonous material in the horse's organs, which material is brought out after a certain amount of exercise. In the country it is advisable to have one or more small paddocks wherein the horses could be exercised during Sundays or any other rest days. It is advisable to let the horse have a bran mash once a week; or give him from 5 to 8 pounds of carrots. At the time pasture commences, do not let the horse out to pasture when very hungry, and always give him a portion of grain or hay before doing so. In the city you can obtain two or three bundles of grass two or three times a week when the grass is in season. When you notice that the horse does not eat properly or refuses the feed entirely, look carefully to the teeth. These may need attention. You can also let the horse miss one or two grain portions and then see whether he eats with more relish. Salt should be given the horse but not in large quantities. Place a piece of rock salt in the manger and the horse will usually lick this whenever he desires. The feeding of sugar, so much in vogue by city horse owners, is not recommended, as too much sugar will cause the development of worms and interfere with the horse's digestive system.

*Watering.*—In watering the horse see that the animal gets a sufficient amount of water; as often, when two or more horses are at the same trough, one of these might be a "bossy" one and interfere with the other animal's drinking. For city horses it is absolutely imperative that the driver carry his own watering pail as this will avoid the necessity of his horse drinking from public fountains and thereby some of the worst ailments will be avoided. It is not advisable to have the horse drink when overheated. It is also best to let a half hour elapse from the time of watering to the time of feeding, no matter whether you water before or after feeding. Too cold water should not



be given to the horse. It is best to have the chill taken out of it, especially in very cold weather.

*Shoeing.*—Shoeing of horses requires a great deal of skill. It is poor policy for the sake of cheapness to have the horses shod by an unskillful shoer. The foot is the most important part of the horse, and if this is in any way impaired, the usefulness of the horse is often reduced to nil. See to it when the horse is newly shod that he does not walk home tight-footed or lame. Let the shoe fit the foot instead of the horse's foot fitting the shoe, and be particular about the trimming of the horse's foot. It is foolish to have the shoer rasp the wall of the hoof just as if it were a grindstone. See, also, that the heels are not contracted. It is better to pay a little more and have your horse shod by a skilled and honest shoer.

*Harnessing.*—In harnessing a horse see that the harness fits well, particularly the collar and saddle. The less harness a work horse has on, the better able he is to do the work. Should you have but light work it is preferable to use a Dutch or humane collar. Do not check-rein a work horse as if it were a show horse. The collar and saddle should be washed and scraped every day, so that they will not irritate the part where they set on the horse. Keep the harness well oiled and clean, and do not let it hang in the stable, as the gas escaping from the manure is of no benefit to the harness leather. Keep the harness in the harness room and each horse's harness on a separate peg. It is especially important to have each horse have its own collar.

*Driving.*—Carefulness in driving often makes a bad tempered horse go in the right direction. It is not necessary to start off with the lash of the whip. A horse has understanding, he has keen eyes and sharp ears; a word of command given in gentle tones will be sufficient for the start. When driving up hill do not make the horse start off on a gallop before fully reaching the top, and then it is advisable to let the horse have a little rest. When driving against the wind, remember that a double force is exerted on the part of the horse, and you should regulate the pace accordingly. Give the animal a rest every once in a

while. Always keep the horse covered when you make a stop and the air is cool; throw the blanket over him, particularly over the loins. In inclement or stormy weather have a storm blanket over the horse when driving. Any little attention which you give to your horse will be amply repaid by the horse's well being and ability to do its full share of the work.

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A HORSE FORTY-TWO YEARS OLD.—Your readers will doubtless be interested in the account of an unusually long-lived horse, which belonged to Chester C. Culver of Albany Co., N. Y. I knew Mr. Culver well, and there is no question as to the horse living to be past forty-two years of age at the time of death on February 1.

This horse was born on the farm of Mr. Culver's father, July 4, 1870, and on the same day Mr. Culver was born. Boy and horse grew up together. When Chester was three years of age the elder Culver gave the horse to him, and the ownership was continued until the death of the horse. Before young Culver was five years old he had learned to ride the horse, a very spirited and powerful animal. On July 4, 1876, centennial year, there was a great celebration in the village of Branchport, and six-year-old Culver, on his "twin," headed the procession amid great applause.

One night, several years ago, Mr. Culver was awakened by a noise near the window of his sleeping-room. He went out and found that the horse had been striking his front feet against the house to attract attention. Mr. Culver went to the barn and found two tramps sleeping in the stall next to the one occupied by the horse.

Mr. Culver became much attached to the horse, which was always a fine roadster even up to his later days. Last spring he was a candidate for sheriff. The single vote against him was cast by a neighbor whom Mr. Culver went to see on foot. Every man whom he and the horse called upon in company voted for Mr. Culver.

This horse was forty-two years six months and two days old on the day of his death, was never sick and appeared as usual on the day before his death.—*T. M. Chadwick in Breeder's Gazette.*

## CONCERNING ANATOMICAL NOMENCLATURE.

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It is not the intention in this article to go into the whole question of veterinary anatomical terminology, but rather to attempt to deal briefly with some features of the situation in this regard, in the hope that it may prove helpful in improving our present predicament.

Doubtless no one familiar with the facts will deny that there is great confusion in our anatomical terminology, and some probably would go so far as to characterize the condition as chaotic. A review of some factors in this anatomical babel may assist in working toward a more tolerable status.

The most evident fact is that the number of names is far in excess of requirements, due to the enormous number of synonyms. This imposes on the student a burden which is worse than useless and is intolerable in the present congested state of the curriculum. It is not so serious so far as the clinician is concerned, but it is sufficiently annoying to the busy practitioner frequently to encounter in the literature terms with which he is not familiar. Even the experienced worker in anatomy every now and again meets with a name, of which the precise significance is doubtful. The writer has kept in close touch for more than twenty years with the literature of this subject, but not infrequently finds—especially in clinical articles—terms with which he is not familiar, although they purport to be anatomical. This multiplicity of terms has arisen in a variety of ways. A majority of the names have been adopted from human anatomy, and some have been applied to structures in animals which were clearly not homologous. Many of the older names were con-

structed with reference only to the horse and are not applicable to other animals. In recent works an effort has been made to correct both of these types of errors. Much duplication has been caused by the translation and adaptation of foreign works by those who were not familiar with the language of the original or not trained anatomists or combined both of these defects. Indications are not wanting of what may be conservatively termed gratuitous originality in the manufacture of names. It is high time that it be generally conceded that the determination of anatomical names lies entirely within the province of anatomists. Great damage has resulted from lack of recognition of the fact that if the terminology is to be in any real sense scientific it must be preserved from mutilation by those who do not understand the problems involved and have not the necessary temperament and training to deal with them. The right to an opinion is not congenital but acquired, and there is no royal road to anatomical competence. The present generation of veterinary anatomists cannot properly be held responsible for the confusion in terminology; it is largely an inheritance. The veterinarians of continental Europe are fortunate in fact that they have been provided, through the efforts of their foremost anatomists, with a uniform set of names which have been chosen with great care. It is sincerely to be hoped that the English-speaking profession will soon co-operate in the substantial adoption of this terminology. As a step toward this end, the American Veterinary Medical Association, at its annual meeting in Toronto, in 1911, appointed a Committee on Revision of the Veterinary Anatomical Nomenclature. This committee presented a preliminary report at the meeting at Indianapolis last year, in which were embodied the principles upon which the revision should be based. The more important recommendations were as follows: That each part should have a single name, the official form of which is in Latin. That personal names should be replaced by objective terms; *e. g.*, Ductus poretideus for Stensons (or Steno's) duct. That related terms shall, as far as feasible, be similar; *e. g.*, Foramen hypoglossi, Nervus hypoglossus, Femur, Arteria femoralis, Vena

femoralis, Nervus femoralis. That preference should be given to brief and simple terms; *e. g.*, Dens for Processus odontoideus; Axis for Epistropheus. That names should be applicable to various species as far as possible, relieving us of such terms as Os suffraginis, Extensor suffraginis. With these principles in view the committee is now engaged in the work of revision, and is using the B. N. A. and the names agreed upon by the congresses of veterinary anatomists at Baden and Stuttgart.\* With these as a basis the undertaking is greatly simplified, but is still difficult enough—"Periculosae plenum opus aleae."

Perhaps the writer will be pardoned for referring in this connection to an article by Dr. Stapley, entitled B. N. A., which appeared in the (London) *Veterinary Journal* (1911, pp. 223 et seq.); it escaped my attention at the time in some inexplicable manner, but has lately been read with interest. With much that Dr. Stapley says in that article, the writer is in hearty accord. But when Dr. Stapley takes me to task for not adhering to the B. N. A. and states that my text-book was "launched under the flag of the B. N. A.," I am compelled to take issue with him. In the work mentioned no reference whatever is made to the B. N. A. The paragraph in the preface which deals with the matter of terminology is as follows: "Veterinary anatomical nomenclature is at present quite chaotic in English-speaking countries. In this work an attempt is made to eliminate some terms which do not appear to the author to fulfill any useful purpose, and others which are clearly erroneous or otherwise undesirable. In many cases the terms agreed upon by the congresses at Baden and Stuttgart are adopted either in the original Latin or in anglicized form; otherwise these terms are added in parentheses. The author favors the substantial adoption of this terminology, but considered it desirable to offer a sort of transitional stage at present." Thus the book was not launched, neither does it sail "under the flag of the B. N. A."

Dr. Stapley states that "Sisson has committed an error of

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\* The Committee (through its chairman, the writer) cordially invites colleagues to favor it with their views on nomenclatural questions.



anatomical judgment in naming the fused clavicular muscles the mastoido-humeralis; these muscles are all named in the B. N. A., and they should have been given in this book." The name mastoido-humeralis was that found in the only existing text-books of Veterinary Anatomy of any value in English, and was retained since it was in general use and did not seem at all highly objectionable. The preferable term, *M. brachiocephalicus*, naturally does not occur at all in the B. N. A., which was written solely to meet the needs of students of human anatomy, neither do the morphological components of the muscle occur in the B. N. A., but they *do* occur in this much-berated text-book of Veterinary Anatomy—and in no other in English—contrary to Dr. Stapley's statements in this connection. The difficulties involved in working out names which rest on a broad morphological basis, and are hence widely applicable, are very great and doubtless in some cases insuperable. These difficulties are nowhere greater than in regard to the muscles, and this is true no matter what basis is selected for the formation of names—chief attachments, action, form, position, nerve supply, etc. There will be general agreement with Dr. Stapley's position that, "Function and structure are most intimately related, and anything tending to divorce anatomy and physiology is against the true interests of these sciences." But functional allusions lead to anatomical troubles sometimes. Thus the *M. extensor carpi ulnaris* of man is also an extensor in the dog, but in the horse, ox, etc., it is a flexor of the carpus. As evidence of the difficulties in this regard it may be stated that an international commission has been working for several years on the revision of the names of the muscles in mammals; it does not appear that their labors are yet drawing to a close. The writer is unable to share Dr. Stapley's enthusiasm concerning the happiness of Owen's name "*protractor scapulae*" for the *omo-transversarius*, and considers the latter term decidedly preferable, for the reason that anatomical names should be framed on an anatomical basis as far as practicable, and not primarily on a physiological basis.

Dr. Stapley takes the ground that "we are compelled to adopt



the B. N. A. as a basis of comparison, and we are compelled to adopt it in its entirety." With this position the writer cannot agree. The B. N. A. was not constructed with any such object in view. It was formed for the use of students of human anatomy, and the chief aim was to secure a single, official, Latin name for each gross structure of the human body, thus ridding the nomenclature of human anatomy of a vast collection of synonyms and checking the addition of useless or objectionable new names. It is probable that no thoughtful anatomical worker will question the great value of the B. N. A. in this respect. The failure of the compilers of the B. N. A. to consider comparative anatomical data in framing the terminology is doubtless regrettable and in some respects difficult to condone; but it must be remembered that the situation was very urgent, and it was therefore desirable to afford relief without unnecessary delay. Furthermore the profound changes involved in a comparative nomenclature would have been quite revolutionary and would have met with most serious opposition on the part of medical teachers and practitioners. It is quite unjust and erroneous to suppose that the eminent anatomists who framed the B. N. A. were narrow in their outlook or unappreciative of the value of comparative anatomy. It is highly probable that, if they had attempted to make the terminology in any full sense comparative, the commission would still be at work.

The defectiveness of the B. N. A. in this regard, and its evident worth in other respects, stimulated the teachers of anatomy in the continental veterinary schools to undertake a revision of anatomical terminology as applied to the domesticated animals. To this end conferences were held at Stuttgart and Baden, subsequent to a large amount of preparatory work by the conferees. So far as the writer is aware, the results of these labors have not been separately published; but it is understood that the names chosen are substantially those which appear in the recent editions of the excellent handbooks of Ellenberger-Baum and Martin.\*

\* Ellenberger und Baum, *Handbuch der vergleichenden Anatomie der Haustiere*; Martin, *Lehrbuch der Anatomie der Haustiere*.

It is this nomenclature which the writer used as a basis for changes in nomenclature which occur in his text-book. It is evident that authors of works of this kind cannot be guided solely by their own inclinations, but must take into account the attitude of colleagues and the relations to the literature in associated branches of scientific work. If a book is to contribute to progress, it must be used, and it is probably the part of wisdom to assist in a gradual evolution. Certainly remarkable mutations occur in nature, but they are the rare exception.

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## CERTAIN PHASES OF OPERATIVE SURGERY.

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*Foreword*—The skeleton of this paper was presented to the Veterinary Medical Association of New York City at their March meeting. It provoked comment and discussion; some of the members were of the opinion that I had placed my standard too high; some admitted that there was room for improvement along lines indicated, but perhaps the best estimate of my paper was that of Dr. Blair, who summed up the matter tersely when he said that, while I had possibly set too high a standard, after all it was good to "hitch one's wagon to a star."

I am therefore encouraged to discuss the present methods of operative veterinary surgery, to briefly compare them with the science and art of human surgery and to endeavor to extract from such discussion matter of use to the veterinarian.

I speak of science and art, not of principles and practice, not of handicraft.

"Science" may well be defined as the ordered and organized experiences of our predecessors; we tabulate them, separate them as far as may be from their grave clothes of error, arrange them in logical sequence and accept their guidance in the practice of our art.

"Art," when we come to define the word, proves more elusive; a barber is a "tonorial artist," a tailor a "sartorial artist"; indeed, every trade is an art.

I use the word here in a higher, yet more limited sense, implying an innate aptitude for the skillful putting into practice of a so-called "liberal art," for example, painting, sculpture, music.

Twenty years ago I wondered why so few veterinarians became even reasonably good surgeons. Given a knowledge of anatomy, it was difficult to understand why a neurectomy, an ovariectomy, or any regular operation, presented more difficulty than the building of a hen coop. What was surgery but the carpenter work of the healing art? I have changed that opinion and now believe that unless a man carries within himself the *germ* of a surgeon, while he may (indeed he often does) attain a respectable degree of proficiency, he cannot become a great surgeon. Given the germ, however, while you withhold the science, and he may travel fast and far. I rather take it that the late "Farmer" Miles had a surgical technique that was hard to beat.

A few months ago I asked one of the most prominent human surgeons in Philadelphia this question: "Can you take a young man into your clinic and make a good surgeon of him if he lacks natural aptitude?" His answer was "No; he will go along a certain distance, then stop, and when he stops I stop him; it is a kindness to him and his prospective patients."

Let us watch the human operator. He is performing a vaginal hysterectomy. His patient has been dieted, purged, and the seat of operation and the surrounding parts sterilized as nearly as may be. The anesthetist attends to business, for all the interest he displays in the operation the surgeon might be fixing a clock. White-garbed, impassive nurses play their part; the surgeon's assistants require no prompting; the vagina is given a last scrubbing; the incisions are fearlessly made, the organ pulled down by vulsella, separated from the bladder by skillful fingers; clamps are applied to the anatomical vessels, and the uterus removed. Careful removal of blood clots and search for small vessels worthy of ligation follow; the wound is packed; the bandage applied; the etherization is stopped at the earliest possible moment, and the patient put back to bed.

Now, it is apparent to all of us that much as we may desire to emulate our human brother's technique, much of it is beyond us. How much of it can we appropriate?

The professional anesthetist we cannot have; we must depend on a brother practitioner, unless we violate the rules of our science and become at once anesthetist and operator. Our nurses and assistants we must pick up on the spot. We may sterilize our hands and instruments, but we cannot sterilize that portion of the United States on which our patient is cast. We can sterilize the field of operation, but can we keep it sterile?

Rather discouraging, isn't it?

But we *can* so prepare our patient beforehand as to limit the anesthetic period. We can limit this period to the painful part of the operation and not give ether or chloroform and then proceed to a discussion of ways and means. We can provide proper facilities for the prompt suppression of hemorrhage; we can cultivate the necessary manual dexterity, and, eliminating unnecessary motion, lessen the risk of shock. In other words, we can introduce methods of factory efficiency into surgery.

Do we usually do it? Answer for yourselves.

Let us look on another picture. Some years ago I sat with Professor Jas. L. Robertson in the amphitheatre of a veterinary school watching a radical operation for poll evil. In a little while operator and assistants were wallowing in blood; all they needed was bandanna handkerchiefs and cutlasses to make them pictures of the pirates of the Spanish Main. Anatomical vessels were cut and—save the mark—seared with hot irons. Saws and chisels were in play; sometimes the patient was under full anesthesia, sometimes he wasn't. Finally my good friend said: "Rogers, let us go out." (I am not sure whether an adjournment to Mr. Dooley's saloon in the Archey road was suggested.) As we passed out, he said: "I know half a dozen easier ways of killing a horse than that one."

With regard to irregular operations we can do much to conserve time, to minimize hemorrhage and lessen shock and before, for example, the removal of a tumor, we should review the anatomy of the part, estimate the nearness and importance of anatomical vessels, nerves and other important tissues that may be implicated; realize that neoplastic vessels will probably exist and

may be big enough to cause considerable bleeding; estimate the relative ease and safety of removal from above to below, or from side to side. Ask ourselves which method will be safest and quickest, consider whether local or systemic anesthesia will best meet the needs of the case and determine how the best cosmetic results may be attained. All this is within our power and is clearly part of our duty.

Veterinarians too often divide themselves into opposite camps in matters surgical; one faction discourages resort to surgery; the other operates on anything and everything, regardless of the probable result; they are after the fee. I don't know which does the most harm to the reputation of the veterinary profession. I do know they should get together and seek a middle path.

It is the little things that count. Dr. Gill's suggestion that in difficult labor in small animals the abdominal cavity be opened and the arrested puppy or kitten pushed along until its removal is possible is a case in point. My method of dividing potatoes or apples found in the cervical portion of the esophagus, considering the obstacle as a tendon to be divided, cutting down onto, not into the esophagus, passing a sharp tenotome through the obstruction, then introducing the blunt-pointed knife and dividing it into two or if necessary four parts, obviates the danger of esophageal fistula.

The use of silver wire in oophorectomy renders stitch abscess impossible. Treating cuts or tears of skin and muscle without the application of sutures lessens scar, and if a blister be applied to the surrounding skin, the wound edges will be much more quickly approximated. The daily cleansing and cooling of a set of slings, followed by washing parts of the body exposed to pressure with alcohol and lemon juice, prevents galling and adds much to the comfort of the patient.

The use of tetanus antitoxin in surgical cases should be universal; if every wound, whether trivial or severe, be promptly followed by the use of 500 units, tetanus will be absolutely eliminated from the category of surgical accidents.

I use it as a matter of routine in some large stables in a lock-



jaw district, and have not had a case in seven years. The cost is 75 cents to the owner, and I inject it first and charge it afterwards. I don't consult him in the matter. The value of the bacterins (bacterial vaccines, killed cultures of staphylo and streptococci suspended in normal saline solution) as adjuvants to the surgical treatment of fistulous withers and poll evil is very great, they lessen the period of incapacity for labor, reduce the temperature, increase the desire for food and the ability to digest it through removal of fever and irritability, and often help cases to a successful issue that would have proved fatal otherwise. It is hardly necessary to say that they will not open an abscess, provide drainage, saw off a necrosed or bony sequestrum; in other words, they are a help to, not substitutes for surgery.

The increasing tendency to perform certain operations without sufficient restraint is, in my opinion, to be deprecated. Castrating a horse standing is a good deal like making a flying drill on the railroad; if all goes well, we save a little time; if it doesn't, well, something happens. I know many owners ask for the standing operation; I also know that its performance introduces unnecessary elements of risk that, in my opinion, overbalance the saving of time and danger of casting; and I may remark in passing that most cases of broken back and limbs occur in the practice of those surgeons who pride themselves on tying up a horse so tight that he can't use his legs. I go to the opposite extreme, believing that if he can use his legs he is less apt to hurt the back, and if one hind leg is placed in a different position to the other he cannot arch the back very effectively.

Lastly do we in any degree elevate our profession when we allow a layman, who knows nothing about it, to dictate to us how we shall operate?

We are better off professionally and financially in the long run if we stand pat and dictate to him.

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DR. WALTER MCHENRY HAS CHANGED HIS LOCATION from Waverly, Iowa, to Pharr, Texas.

## PERITONITIS.\*

DR. WILLIAM DRINKWATER, MONTICELLO, IA.

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This is a disease which we read of in books and meet with in practice, but we seldom hear it discussed among practitioners or at our association meetings.

It is well known to be inflammation of the peritoneum or the serous membrane lining the abdominal cavity and passes up the sides and envelops the viscera contained in the cavity.

In the writer's experience it has most often been seen as a complication with enteritis, metritis, after operations to relieve hernia, castration, by external injuries, such as falling heavily on the abdomen on slippery roads, kicks by other horses or blows with a heavy stick, and is associated with hernia in old mares or cows in advanced pregnancy, where the abdominal muscles rupture and allow a portion of the viscera to protrude to the skin and is generally associated with ascites of the part. The disease is not always recognized because the symptoms are so much like colic or impaction of the bowels that the ordinary stockman is apt to be dosing the animal for its water for a day or two before calling in the veterinarian, and then the nature of the disease is not readily detected, unless one has had some experience with it and looks carefully for diagnostic symptoms. We know the patient does not show the sudden and severe symptoms of colic, nor the stretching, as if to urinate as in impaction of the bowels, but keeps the legs in a more natural position and walks around in a restless manner sometimes and at other times stands still, and has an expression of distress in its face and a tucked-up appearance of the abdomen. One prominent symptom is a hard or tense pulse, almost like the human pulse in feel and frequency. There is little or no appetite and very little movement of the bowels,

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\* Presented to the Twenty-fifth Annual Meeting of the Iowa Veterinary Association, at Ames, November, 1912. Reprinted from published report.

and the urine when passed is highly reddish in color and scanty, and as the disease progresses, the pulse becomes imperceptible, and death sometimes comes on quite suddenly.

We know it follows castration, but if the usual aseptic precautions are taken for the operation, it seldom occurs; but if the horse is cast very heavily on its abdomen before the operation or confined in a building after the operation where cool drafts strike the legs and incised parts and perhaps by the ingress of cold air through the wounds in the abdominal cavity sets up inflammation of the peritoneal lining. This is usually evidenced by a continuous trembling and tucked-up abdomen and short breathing, drooped ears, and a rusty discharge from the wounds and a very tense pulse. The treatment in this case would indicate a wet sheet (and kept wet) laid up to the abdomen and bound up by bandages around the body and hypodermic injections of morphine and hyoscine and rectal injections of warm water, and when the bowel is carefully cleared to leave a mixture of water, milk and eggs or oatmeal gruel in the colon to give a little nourishment, and when there are some signs of improvement to give one-ounce doses of sulphate of magnesia every two or three hours till movement of the bowels are set up and light nourishing diet for some time afterward.

When seen in mares and cows in advanced pregnancy, it is often associated with ascites and hernia, and it would seem that an old sling adjusted to the body to keep the parts in position and allow the patient to have a little freedom, where it can lie down with no danger of slipping when rising and keep the bowels in a relaxed condition and circulation stimulated by digitalis. One authority recommends tincture of arnica in small doses, repeated often; and hot and cold applications to the abdomen have their advocates; but as we meet with it seldom, as compared to other forms of inflammation, we are as seldom prepared to treat it as it would indicate; and as it generally is well advanced before we are positive of the real condition, treatment is next to hopeless.

Hoping to have the opinion of the members of this society on peritonitis, I leave it before you.

## DRAFT-HORSE BREEDING.\*

By. E. S. AKIN.

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From the lack of interest in draft horse breeding it would seem that some plan had been worked out whereby farm work and farm machinery could be operated without horse power. This, of course, is not true, the facts showing just the opposite. As the younger generation of farmers learn the better and more up-to-date methods of cultivating the soil, the requirements in more, larger and better tools have doubled. The hired man's wages have also doubled, making hand labor too expensive to use in place of machinery. Horse power on the farm to-day is the first and greatest consideration; without horse power your farm is worthless, and it is only valuable in proportion as you use this power to the fullest extent in its cultivation. Think of what our great railroad lines would be like if limited to locomotives of one-third or one-half their present power. Yet many farms are being poorly farmed with inadequate horse power.

Instead of our farmers giving the horse but little or no consideration, he should be developed and improved to our best advantage. The little kingdom of Belgium produces four times as much per acre as do the average farms of the United States. The price of land in the Middle West is from \$100 to \$300 per acre. Why? Better cultivation and more brains mixed in their live stock production. If you are only earning a living on your farm, just about keeping even, your farm is practically worthless as an investment. A little good hard study on what has been done and what is now being done in horse breeding, considering only the practical, profitable, hard horse sense end of the business, will give you an outline from which you can decide on a working plan to improve your farm, increase its productiveness and your income.

Estimating the amount of horse power you will require on your farm is something like estimating the cost of building or

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\* Reprinted from the *Rural New Yorker*.

repairing a house; the time is pretty sure to come when your estimate is a little low. After deciding on the number of horses that will do the work in first-class shape on your farm, you must decide on the breed of horses best suited for farm work and to make you a profit, when your surplus stock is sold, giving consideration to your market facilities.

The draft horse is the only kind that it is possible for the farmer to consider at the present time. There are several breeds of draft horses. All have their admirers and advocates. A little study of the kinds that are the most largely used and bring the highest prices in our large cities will help you to decide on the breed that it is the most profitable to handle, and after you decide on your breed see that your work stock are all mares. If you have geldings, sell them. It costs no more to keep a mare, and a good grade mare properly mated will produce you a \$100 weanling colt, besides earning her keep. No matter how many mares you have on the farm, breed them all to the very best draft stallion available of the breed you have selected. The ordinary farmer gets about 50 per cent. of his mares in foal. With care you should do better than this. Stick to our breed. Remember that a uniform bunch of colts, all of one kind, will look better to a buyer than a mixture. Good breeding and good feeding are sure to show in the quality of your stock, and the quality of your horse means money. No other class of live stock is so necessary on the farm, so easily raised and cared for and so easily turned into money at a profit as the draft horse. A combined effort should be made to give draft horse breeding a prominent place in the eastern agricultural press and in the programmes of all of our farmers' institutes, and a more practical side of the business should be given to the students at our agricultural colleges.

NOTE—The opinions voiced in the foregoing article, expressive of the needs in regard to horses from the farmer's viewpoint, are so much in accord with those frequently expressed by the REVIEW, that we were attracted by it; and we have reprinted it so as to bring these expressed needs direct from the farm to the American veterinary profession, that it may act as a stimulus upon its members to take up these matters and discuss them in a whole-hearted manner through the medium of these pages, and be in a position to offer to their brothers engaged in agricultural pursuits, solutions to some of the breeding problems that confront them, and stimulate an interest in this neglected side of agriculture that holds so much for those who enter into it scientifically. We would like to add to the last paragraph of Mr. Akin's article—after the words "agricultural colleges"—veterinary colleges, veterinary organizations and current veterinary literature.

—[EDITOR.]

## REPORTS OF CASES.

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### ACUTE DISEASE AMONG CATTLE WITH NERVOUS SYMPTOMS.\*

By F. B. COPELAND, Logan, Ia.

About six o'clock in the morning received a call to come two miles south of Beebeetown at once and bring instruments for a post mortem on a cow. It being a distance of sixteen miles from my home, we did not reach the place until about seven o'clock. On arrival we were told by the owner that his cattle were dying very rapidly from some unknown cause, three being dead and one more affected. He also stated that the cows would only live from eight to twenty hours after becoming affected enough to be noticed, that they did nothing but scratch the head, throat and neck, and this so incessantly and vigorously as to cause those parts to swell to enormous size, causing death in a short time. One cow lay on the ground in the house yard dead, having been shot by a neighbor the evening before on request of the owner's wife. The lady had been left alone all day and becoming frightened at the actions of this particular cow, had phoned a neighbor to come over and kill her, lest, as she explained, it might get to rubbing on the house during the night. The neighbor had done her bidding. Before our arrival the cow's skin had been removed, and the head and neck showed large congested and contused areas especially about the throat and intermaxillary space. No other external lesions were present. The owner then conducted us to a cow barn, from whence came occasional muffled bellows or moans. Here we found a living victim in the form of a three-year-old cow, fat and stout, weighing perhaps 1,100 pounds. She stood in a stanchion, with a heavy rope drawn tight about her body, passing over the sacral region and down in front of the udder, the same as is used on kickers. This contrivance had been put on to keep her from scratching her head or neck with a foot of the posterior limb. Neck and throat were swelled considerably, and hair almost all rubbed from the sides of neck and external portion of inferior maxillary. Lips were swelled, and

\* Presented to the Twenty-fifth Annual Meeting of the Iowa Veterinary Association at Ames, November, 1912.—Reprinted from published report.



especially the inferior which was continually being rubbed on the sides or bottom of the manger. The denuded areas were raw and red, some being bloody. The cow was continually on the move, first one way, then another, stepping about and shaking head when not rubbing nose on manger. Occasionally a groan or low bellow escaped her lips. Respirations were increased to 40 or 50 per minute. Temperature, 100 degrees. An examination of buccal cavity was made with difficulty by forcing on a speculum and tying it from each side to parts of the manger. Nothing was found with the mouth or tongue, which looked out of the ordinary, though a slight discharge of watery serum from the nose was noticed and a peculiar fetid odor was observed in the mouth. The animal appeared stiff and disinclined to move about the barn, especially refusing to step backward. The owner now told us that all the cows had acted exactly like this one, and that Dr. Newland from Neola had attended the others, finding temperatures subnormal on all of them. I later learned from Dr. Newland that the temperatures of the three he had seen were 99, 98.7, 99.4 degrees, respectively. One cow we were told had torn and lacerated her ear and head terribly in an attempt to scratch on a barbed wire fence. Another had broken her ear down by rubbing it vigorously on the 2 x 6 timber around the inside of the barn. We returned to the cadaver outside for post mortem. Nothing out of the ordinary was observed, except swelled and congested sub-maxillary and parotid regions with hyperemia of sub-maxillary lymph glands and congestions of blood in subcutaneous tissue about the throat and head. We next inquired as to feed and water given and were told animals had been on blue grass pasture, but this being short, had been fed on corn fodder cut from a patch of low ground nearby. Water was from a 90-foot drilled well. No treatment was decided on, but on returning home, Dr. J. I. Gibson was acquainted with the conditions, and further work was taken up by an assistant sent by him to investigate the matter. In all, six cows died out of a herd of thirty. No other cases were discovered in the neighborhood. Cows ranged from three to twelve years in age. The younger seemed to live longer, some lasting eighteen to twenty hours, while older ones died in from ten to twelve hours. The disease resembled hemorrhagic septicaemia, except that areas affected were confined to head and neck only, and body temperature at all stages seemed to be subnormal. Diagnosis was withheld.

The Animal Health Commission is to be commended on the

excellent work it has been doing, but its work should be extended to include the very essential work of municipal inspection in which the veterinary profession can more directly than in any other way extend its work to benefit the health of the human race, and both directly and indirectly save many lives.

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### CURIOUS SEQUELAE TO "WILLIAMS' OPERATION" FOR ROARING.

By E. A. WESTON, B.V.Sc., Perth, Western Australia.

The subject of this article was a five-year-old chestnut mare, purchased for the police department and shipped from the North-west. Coming down in the boat, she was badly bitten about the face and along the neck by another horse, and when put into work here roared so badly that she had to be cast. Subsequently she came into my hands for operation, and on June 18 I operated on her at Mr. McIntosh's Veterinary Hospital. Unfortunately, she was removed from there, and during my absence for a few days the wound was sadly neglected and got into a very foul condition. Notwithstanding this, the mare made a good recovery, and the groom reported that she had ceased roaring. Previously she could be heard even when playing with the other horses in the paddock, but after the operation wound healed I had her given a brisk trot and failed to detect any sound. After some weeks, however, the roaring commenced afresh and gradually increased in intensity, rendering the mare practically worthless, and she was turned out to grass. I happened to be out in the paddock on the 15th of October, and at that time the breathing was so distressed that it could be heard some distance off, even when the mare was at rest. On making an examination I had no difficulty in diagnosing an ossifying chondritis of the larynx. Intended having the mare destroyed, but the matter was overlooked and on the 31st she died. Post-mortem examination revealed the presence of a series of polypoid growths, attached to the mucosa along the site of the previous incision. They varied in size from a pea to a small plum. The laryngeal cartilages were undergoing ossification, and the rigid larynx, with its lumen blocked by the growths, accounted for the excessive dyspnoea. The left ventricle was completely obliterated, though I very much doubt whether I made a clean sweep of the mucous lining when

operating. The right ventricle was done as a sort of after-thought, and there was only an incomplete adhesion, though I failed to detect any accumulation of mucus, such as some sur-



geons say occurs in such cases within the cavity which persisted.

In the accompanying photo the larynx is opened from behind to show the polypoid growths.

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### AN ADENO-CARCINOMA ON THE PLANTAR SURFACE OF A DOG'S FOOT.\*

By E. B. ACKERMAN, D.V.S., Brooklyn, N. Y.

The accompanying cut illustrates a case met in our practice during the past winter, the subject being an eight-year-old fox terrier male, with the following history: The growth, which was located on the plantar surface of the left hind foot, had been growing for about four years; but had not reached any great proportions until about a year prior to our visit (January 28, 1913),

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\* Presented to the February meeting of the Veterinary Medical Association of New York City.

when a veterinarian had been called. He decided that it was due to a foreign body, and that there was pus present. An incision was made in the dorsal surface of the foot, but no foreign body was found, nor abscess formation present. The owner stated that, since that time, the tumor had grown more rapidly until it had finally reached the present proportions, about the size of



an English walnut. It bled profusely at times, probably due to the irritation caused by the animal biting and scratching it, and discharged a sticky, somewhat purulent material, probably cancer milk.

After an examination of the case we advised the owner that the only course was amputation of the foot at the distal end of the metatarsal region, or destruction of the animal. The latter was decided upon, and the dog was chloroformed, and a section of the growth sent to the New York State Veterinary College for histological examination, which resulted in a report of carcinoma.

Believing this case to be of interest to practitioners, because of the rather unusual situation of the growth, rather than from the character of it, I have brought it to the attention of this body, and present the specimen for your inspection.

## TWO CASES TREATED BY AUTOTHERAPY.

By W. J. MAGEE, D.V.S., New York, N. Y.

*Case No. 1.*—*Gray Gelding* received a kick from a stable companion on July 16, 1912, and I was called three (3) days later to treat him for it, and found the animal upon three legs, so to speak, and in great pain. Temperature 104 degrees and unable to place the foot of the injured leg upon the ground. A piece of burlap was tied about the hock, and they had been keeping it wet with hot water. Upon examination I found that the ergot or wart of the near hind hock had been cut across, and half of it had been entirely removed, and the wound itself had penetrated the joint, from which a flow of the synovial fluid was escaping and dropping from the hair at the ankle to the floor. The wound was cleansed and a dressing of powdered salicylic acid with collodion applied under a bandage, and similar dressings were used three times at intervals of two days, with no improvement in the animal's condition. On July 27, 12 iv 5 of the discharge was collected and made up with water from the faucet to vi 3 with the directions to give one ounce every hour until all was used (6 doses in all); the wound was dressed with tr. iodine and phenol 95 per cent. equal parts and powdered salicylic acid, collodion and cotton as before. This dressing was not removed until three days later, when the animal was walked from the box stall, placing the toe upon the ground and dropping back upon the heel with but little lameness. Temperature 101 degrees, and upon removing the dressing, found I could not collect enough discharge for another treatment, nor was it at all necessary. The wound was dressed as before at two consecutive visits, when a blister was applied and the animal returned to his usual labor August 19, 1912, none the worse for his experience.

*Case No. 2.*—*Bay Gelding* with an opening on right side of shoulder from a fistula of withers, with a discharge from it flowing down to the elbow. Upon probing, found that the tract extended across the shoulder, and I could feel the end of probe under the skin of the opposite side. This animal had been under treatment for a period of from seven to nine weeks by another veterinarian with no improvement in his condition, and the owner requested me to cut it all out. I informed him that if it had to be cut, the animal would have to be cast or placed upon the operating table, for he was a very vicious brute and could not be secured in any other way for operation.

I collected iv 5 of the discharge and made it up to vi 3 with water from the faucet with directions to give *one ounce* every hour until it was all used. I did not see the patient again for a period of six days, and then found that the appearance of the discharge had changed and was less in quantity.

This treatment was continued at intervals of from six to eight days from October 19 to November 27, 1912 (six treatments in all), and during this time, as the discharge became less in quantity, it was always made up to vi 3 with water, for it appears to me as if the patient will and does regulate his own dosage. This animal did not miss a day's work, except on the days that he received his medicine, and nothing was injected or inserted into the opening or tract after the first examination; but the discharge was washed off every day, except for twenty-four hours previous to my visit, when it was allowed to remain for my collection.

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### POST MORTEM.

By JOHN F. WINCHESTER, D.V.S., Lawrence, Mass.

Post mortem of black gelding 20 hours after death November 25, 1911. Bloated; ulcer left foreleg under the fetlock; bar shoe right fore foot; aged; pupils dilated; mucous membrane of bucal cavity cyanotic; body on right side.

When removing the hide from left leg and left side of neck, the blood flows freely and does not clot. Radials in this region filled with blood. Radials filled on right hip with echymotic spots—cyanotic. Right side of neck under the skin hyperæmic, and petichial spots extending over the scapula region.

The muscular tissue on left side of neck hyperæmic; blood fluid dark and flows freely when the tissue is cut; the same condition seen on right side of neck, but not so gross.

When the left foreleg is removed from body, the blood flows freely, while when the right leg is removed not so much blood seen.

When the abdominal cavity is opened, a small quantity of serous fluid escapes.

A small aneurism due to struggles is found at ciliaxis.

A part of the capsule of right lobe of liver on its visceral side is thickened.

Anterior lobe left lung cyanotic, with petichial spots and blood.



Petichial spots on left heart, small clot in left heart partly amber color, while the right heart is empty.

Mucous membranes of trachea, mouth and tongue are cyanotic.

Blood vessels in the convolutions of the cerebrum and cerebellum are hyperæmic. The plexus at base of cerebellum hyperæmic.

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#### BIOGRAPHY OF "KIT."

Kit, an Indian pony mare owned at Le Claire, Iowa, by the J. M. Hawthorne family, is thought to be the oldest mare in the state, if not in the country. She was born at the Indian reservation in Tama County, Ia., in May, 1865, where she was reared to the age of three years, and broken to the saddle by the Indians,



who sold her and her mate, Ginger, to W. D. Rambo, of Vinton, Ia., who purchased them for his sister, Mrs. Elizabeth Hitchcock, of Le Claire, Ia. The ponies were taken to the Rambo farm,

near Vinton, where they were broken to harness and later driven to Le Claire. Shortly afterwards the ponies were separated, and Ginger, being of an unruly disposition, was sold, while Kit remained in the family. At one time she was sold out of the family for a few years only, when she was bought back by Capt. J. M. Hawthorne, a brother-in-law of her former mistress, who purchased her for his little niece. She has been a cherished pet in her present home for twenty-three years, having attained the advanced age of forty-seven years and over. She is still enjoying the best of health, and has retained all of her senses. She readily eats her corn from the cob, but much prefers grazing, to hay in her manger. She is a little larger than the average Indian pony, her average weight being about 750 pounds. Her color is bright sorrel, with a white strip on her face. She is intelligent, and in her younger days was a handsome and spirited animal. A true Indian in disposition, possessing all the trickery characteristic of the race, yet kind and loving with those who cared for her. Always a faithful driver, and with cunning ways, that would take her through places where no other horse would dare to venture. Being mostly handled and driven by children, it is safe to say she knows every road as well as every nut tree and apple tree in the community for miles around, and no person ever enjoyed the sport of a hunting trip more than "The Indian," as she is known to every one in the vicinity that has been her home for so many years.

Kit has always been healthy, but thrives best in cold weather. She has been often overcome with heat, but has never really known what a sick day was. She is living now in retirement and being cared for by the family whom she has served so long.

J. M. Hawthorne.

GERTRUDE M. OWEN,

A member of the family.

NOTE.—The above was received through the courtesy of Dr. G. Lomes, Dysart, Iowa, who states that he has known the pony for forty years, as will be seen by his letter of transmittal following, which we have taken the liberty of publishing: "Dysart, Iowa, April 9, 1913. *Editors, AMERICAN VETERINARY REVIEW.* Inclosed find picture of pony and owner and biography of same, which I believe is correct, as the people mentioned all belong to one family. I am acquainted with all of them and have known the pony for forty years, and I believe the statements made are correct. I was born and raised at Le Claire, Iowa, fourteen miles from Davenport. If you wish to publish picture and short sketch, you can do so, and know you are presenting the truth. Yours truly (Signed) G. LOMES."

## ABSTRACTS FROM EXCHANGES.

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### ENGLISH REVIEW.

By Prof. A. LIAUTARD, M.D., V.M.

THE TREATMENT OF PLEURITIC EFFUSIONS [*Major E. E. Martin, A.V.C.*].—As the results of numerous instances where early punctures of the chest have been resorted to, the author sums up the following conclusions:

1. Puncture of the horse's chest, provided simple antiseptic precautions are taken, is absolutely harmless and may be repeated on either side as often as is required.

2. It is the only satisfactory means of diagnosing effusion in its early stages.

3. If withdrawal of the fluid takes place before it has reached abnormal quantities, the tendency for it to reaccumulate is not very great.

4. In cases of reaccumulation the fluid may be withdrawn several times, and recovery takes place.

5. The character of the exudate does not greatly affect the prognosis.

6. Early withdrawal of the fluid reduces the mortality to an extraordinary extent.

7. It also shortens the convalescent period very considerably.

—(*Veter. Record.*)

AN EXPERIMENT WITH ARECOLINE HYDROBROMIDE [*Junior*].—A four-year-old cow, due to calve in about 6 weeks, had been ailing with symptoms of impaction of the stomach for four weeks. All kinds of treatment had failed to relieve her. The author decided to try the injection of arecoline hydrobromide and gave hypodermically 1 grain in solution, made for the  $\frac{1}{2}$  grain tablets of Parke, Davis & Co. In less than 5 minutes the animal showed great distress, groans loudly with mouth wide open and tongue out. No salivation—no defecation. One minute more, and the

animal died without a struggle. The autopsy revealed the stomachs impacted with food of fairly normal consistency and the small intestines acutely inflamed in patches. The use of this form of drug is not entirely free from risk; hence the publishing of the above.—(*Vet. Rec.*)

PYELO NEPHRITIS IN A MARE—*BACILLUS COLI COMMUNIS* AND *STAPHYLOCOCCUS ALBUS* PRESENT [*W. M. Scott, F.R.C.V.S.*].—A mare has been slowly losing condition. No definite diagnosis could be arrived at, notwithstanding careful general examination. At last her condition suggested kidney disturbance. She had great thirst, repeated micturition, dropsy of the hind legs and slight oedema of the breast. A little urine being obtained by catheterism, it was examined and the case diagnosed one of specific purulent nephritis. Appropriate treatment prescribed without improvement after one month, and as the animal was getting worse she was destroyed according to owner's wishes. Post mortem revealed all the organs healthy, except the liver, which was cirrhotic, and the urinary apparatus, where the left kidney was found shrunken with hemorrhagic infarcts and purulent mass in the pelvis. The right kidney was diseased also, but to a less extent. The bladder was the seat of old standing catarrhal cystitis. In the pus, taken from the kidney, cultures were made and gave abundant colonies of *bacillus coli communis* and of *staphylococcus albus*.—(*Vet. Record.*)

A CASE OF "INTUSSUSCEPTION"? [*Capt. A. F. Deacon, A.V.C.*].—Horse is taken with great colicky pains; has a tendency "to lie down, his forelegs stretched out and his head between them resting his forehead on the ground. When standing, he seems unable to raise his head." Temperature was 104.6 degrees F. Respiration 26. Pulse 58. Rectum was relieved from its contents and enemas prescribed. Relief follows. On the same day the horse has two more similar attacks followed by the same treatment and relief. The day after, the manifestations returned and subdued again with the same treatment. On the third day, there was yet no passage, but a great deal of straining, and on an attempt to take away the feces it "was found that there was a great deal of resistance, owing to the gut being forced back, and when the hand was taken out a portion of the bowel was everted; this was put back and treatment discontinued. From this onwards the animal made an uninterrupted recovery."—(*Vet. Journal.*)

GASTROTOMY IN A BITCH [G. Mayall, M.R.C.V.S.].—Airedale terrier bitch has been gradually getting thin for some months. On examination an elongated, sausage-like body is felt in her abdomen, and manipulated in the stomach region and small bowel. Under anesthetic laparotomy is performed and the sausage-like body felt for, it proved to be the stomach and about four inches of bowel leading from it. The stomach was opened and found to contain about 160 particles of different hard and soft substances. A round piece of wool, one of India rubber, cotton thread, very numerous small bones, two or three little stones. A large opening had to be made on the stomach and bowel to remove all those foreign bodies and make abundant disinfecting washings. The wound was closed. The result was that the bitch died during the night following the operation.—(*Ibidem.*)

AN EXPERIMENT WITH ESERINE [G. O. Rushie Grey, Student.].—Called to a case of impaction in a Devon steer, two years old; he found him off his feed, in pain and having passed no feces for many hours. He had received sulph. of magnesia and oil lini., also enemas and had his rectum emptied by "back-raking." The animal was in pain, groaning, with mucous membranes injected, pulse 65, temperature 103 degrees F. There was slight tympanitis and violent muscular trembling. Treatment consisted in the administration of eserine given hypodermically. In half an hour the animal showed much pain, loud moaning. In forty-five minutes a single handful of feces was passed; during the night there was more. A stimulant drench was given. On the third day a normal lot of feces was passed. The animal had only 1 grain of eserine (Parke, Davis & Co.). The writer believes that such a dose ought to be followed by another smaller fifteen minutes after.—(*Vet. Record.*)

SCOUR IN CALVES TREATED WITH ACETOZONE [B. J. P. Mahony, M.R.C.V.S.].—Several calves were taken with scours, and two have already died; two are in a very bad condition. Their recovery is doubtful, as they pass much blood in the mucus. Acetozone was given in milk every six hours, and all the animals, including the very sick ones, recovered after a few days. The preparation of Parke, Davis & Co. is very soluble, and the solution to be given was about 20 grains to a quart of water or milk.—(*Vet. Record.*)



## FRENCH REVIEW.

By A. LIAUTARD, M.D., V.M.

OBSTRUCTION OF THE RECTUM AND FLOATING COLON [*Mr. Bonnigal*].—An eight-year-old gelding had slight colic; no tympanitis. He urinates frequently and makes efforts to defecate. Rectal exploration reveals under the rectum, 15 centimeters from the anus, a mass as big as the fist, giving the sensation of intestines filled with hard matter. Superiorly this is continued by a kind of strangulation. The rectal cavity is not twisted, but it seems as if the floating colon is encircling all round it and prevents intestinal evacuation. Laxatives, pilocarpine, large enemata bring on relief, which lasts for two days, when suddenly, after a short spell of pains, the animal dies. *Post mortem*: Eight or ten litres of blood in the abdomen. The hemorrhage is due to rupture of the veins of the last portion of the mesentery. There is no inflammation of the peritoneum. All the digestive tract is normal.—(*Presse Veter.*)

OCCCLUSION OF THE URETHRA IN A HEIFER [*Mr. Ricordeau*].—A two-months-old Norman heifer is sold to a butcher. At the slaughtering house, while the dressing of the carcass takes place, an abnormal globule was observed. It is the bladder largely distended, weighing 14 kilog. 300 gram. By accidental manipulation its contents are allowed to escape, consisting of yellow pus, thick, creamy, resembling that of pus in adenitis of distemper. The vesical wall was very thick, and its epithelium ulcerated in places. The ureters are normal, the kidneys also. The urethra is much elongated, much thickened, and while its mucous membrane is normal, a probe introduced in it is prevented from going further than the neck, the bladder being a completely closed sac. The previous history of the animal was that lately the heifer had not done well and had difficulty in making water. It is quite strange that she had been able to reach her age without manifesting any apparent pain, and having such urethral occlusions.—(*Rec. de Med. Vet.*)

CASTRATION OF MARES BY INGUINAL METHOD [*Mr. Albert Vinsot*].—This is a new mode of operating, which has been tried in a six-year-old mare which was very troublesome while in harness and at work. The operation is described as follows: After a few days of preparation, the mare was secured in a bascule-stock with the hind legs fixed as for castration of cryptorchid.



Asepsy being carried out minutiously, the tissues were divided a little below the inguinal ring and at once the connective tissue lacerated; the hand was introduced cone-hape in the canal, pushed in the direction of the external angle of the ilium, as high as possible, beyond the superior ring. The thin peritoneal wall was punctured with the index finger, the opening enlarged with this and the medium finger spread open and the whole hand entered into the abdomen, when the ovary could be taken hold of in its normal situation, a little back of the kidney, in the sublumbar region. Drawn near the peritoneal opening, an ecraseur was applied close to it, the ovary was then amputated. There was no sequelæ to the operation; the animal, however, was not relieved of her bad dispositions for two months after, when she could return to her work and perform it well.—(*Bullet. de la Soc. Centrale.*)

ACQUIRED HYDROCEPHALY IN DOG [*Prof. Roquet*].—A King Charles slut was seen by the author, with right unilateral paralysis of sensation and motion. She was four years old; insensible to pricks of pins made on the right side. There is complete muscular resolution in the paralyzed regions. Held in a standing position, the animal drops on the right side; she always lays in right lateral decubitus. The animal has always appeared unconscious of her surroundings, not recognizing anyone nor answering calls. There is auditory and visual insensibility. The slut is stupid, she is idiotic. Organs of vegetative life are the only preserved. She is destroyed. The lesions of the nervous centres are very interesting. The dura mater is considerably thickened. The pia mater forms a more or less thick cover also. Under those membranes the encephalon appears as a large pouch, containing between 80 and 100 c.c. of whitish liquid with albuminoid granulations, mononuclear leucocytes, epithelial cells, few hematics and fibrinous threads. The corpus callosum uniting the two hemispheres is only a thin band. The septum lucidum is perforated. The lateral ventricles form two cavities communicating by the septum lucidum. The cerebral trigone, corpora striata and thalamus optici are slightly atrophied.—(*Journ. de Zootech.*)

SARCOMA OF THE NECK IN A STEER [*Pierre Bitard*].—Handsome Charolais steer, four years old, has had for the past seven weeks an enlargement of the neck. He eats poorly, ruminates with difficulty and is losing flesh. The growth has begun to in-

crease and, starting from the groove of the jugulars, it forms now a big tumor which is spread on the lower border of the neck, and is more apparent on the left than on the right side. There is no subcutaneous infiltration; the jugular veins are pushed outwards and form two big cords running upwards on the lower border of the neck. The tumor is hard, tense, not painful, not adherent to the skin or tissues underneath. The animal takes hold of her food well, chews it carefully and the alimentary ball slides slowly down the oesophagus. Loud eructations follow. Unfavorable prognosis is made and the steer is destroyed. At the examination of the carcass the lymphatic glands of the thoracic cavity were found hypertrophied and infiltrated. The growth extracted weighed 6 kilogrammes 500 grammes. It had the form of a cocoanut, a little elongated, with both ends flattened. A section revealed its sarcomatous nature.—(*Progress Veter.*)

OLD DIAPHRAGMATIC LACERATION—STRANGULATED HERNIA IN A MULE [*J. Lebasque, Army Veter.*].—A thirteen-year-old mule has colic for thirteen hours. There has been no micturition or defecation. No tympanitis. Abdomen painful on pressure near the xyphoid appendix. Classic treatment and pilocarpine are prescribed, followed afterwards with oil drench, opium and chloral. Temporary relief follows but for short time only. Morphine is given. The pulse becomes thready, the mucous membranes cyanotic, the colic suddenly subsides, the mule dies after being sick twenty-nine hours. At the post mortem, on opening the abdomen, two litres of rosy fluid escape. A laceration of the diaphragm is detected, and through the ring that it formed, a large loop of small intestine has passed into the thorax, in which about 4 litres of black fluid with foetid odor are found. A fold of the intestine and the omentum have passed through the diaphragmatic ring, which is of old standing. The protruding intestinal portions and the omentum are in a state of gangrene. There were also in the other organs of both splanchnic cavities lesions of auto-infection.—(*Rec. de Med. Vet.*)

#### GERMAN REVIEW.

By JOHN P. O'LEARY, V.M.D.

CONTRIBUTION TO THE TREATMENT OF INFECTIOUS PNEUMONIA INFLUENZA, WITH SALVARSAN [*Chief Veterinarian Dr.*

*Jacob*].—Aroused by the positive results which Rips had recorded with salvarsan therapy in influenza, Jacob administered the remedy in the form of intravenous infusions in 12 horses attacked with influenza; the results obtained were as follows:

1. In all cases the temperature subsided in from fifteen to twenty hours to normal and remained at that point continuously.

2. In all cases, immediately after the lowering of the temperature the accompanying symptoms of the disease disappeared.

3. Immediately after the infusions were given the secondary effects subsided rapidly without injury to the system. It is of the utmost importance that the exciting agent of the disease be rendered harmless at the earliest moment before essential morbid changes take place in the organs. In the opinion of the author, salvarsan should be administered as early as the first or second day of the disease.—(*Zeitschrift für Veterinark*, 23. Jahrg., 8/9 Heft, S. 406.)

CONCERNING THE CHEMO-THERAPEUTIC TREATMENT OF INFLUENZA OF THE HORSE [*Preliminary report by Chief Veterinarian Rips*].—It seems that in the well-known specific for syphilis, salvarsan (Ehrlich-Hata, 606), an effective remedy for influenza has been discovered. The author has succeeded in checking the disease in its incipient stage by means of a single intravenous application of the remedy. The dose administered was in the proportion of 0.01 grammes of salvarsan to the kilo body-weight. Three grammes of salvarsan in 1,500 grammes of a physiological salt solution was sufficient as a rule. Occasionally therapeutic doses in the later stages of influenza had a benign effect. With sterile precautions the use of this preparation is harmless for the patient.—(*Deutsche Tierärztliche Wochenschrift*, No. 33, 1912.)

THE TREATMENT OF TETANUS BY SUBCUTANEOUS INJECTIONS OF NITRATE OF PILOCARPINE [*Drs. Remond and Aouizerate*].—The authors reported two cases of recovery from peracute tetanus in horses through subcutaneous injections of pilocarpine nitrate. The first horse was given an injection of 0.10 c.c. of the alkaloid three times daily for days; the second horse received the same dose subcutaneously three times daily for eight days. After the eighth day all symptoms of tetanus disappeared in both cases.—(*Berliner Tierärztliche Wochenschrift*, No. 42, 1912.)

CONCERNING ADAMANTINOMES IN THE DOMESTIC ANIMALS [Prof. A. F. Fölger].—Concerning adamantinoma, which is a peculiar, extremely rare epithelial tumor and which is similar in a histological sense to the enameled organ. In animals (especially cats), so far only two cases have been reported by Lienaux (*Epulis du chat; deux cas d'epitheliomes adamantins. Annales de Méd. Vétér. Bd. 49, 1900. § 18*). At this date Fölger describes minutely three cases occurring in cattle; the growths emanated in each case from the body of the inferior maxilla.—(*Maanedssk, für Dyrlæger, 24. Baud, Heft 14.*)

CONCERNING EUCERIN SALVE [Dr. Gaertner, Wolgast].—In an article concerning the treatment of infectious vaginal catarrh of cattle, in No. 8 of this journal, the author has also reported excellent results from the use of Bacillot-Eucerin salve in sarcoptes mange of the dog and horse, and as a foot salve for cattle. Other practitioners have tested in practice the following Eucerin salves:

1. Plumbi Acetatis .....	3.50 grammes
Alumin Ernd.....	1.75 grammes
Eucerin Anhydr.....	43.00 grammes
Aqua Destillatæ.....	51.75 grammes
2. Liqu. Alumin, Acetici.....	} aa 100.0
Eucerin Anhydrici.....	
3. Liqu. Plumbi Subacetici.....	} aa 100.0
Eucerin Anhydrici.....	

Recently the author has substituted for these three cooling salves a 5 per cent. alsol salve (Liq. Alsoli, 10.0 grammes; Aqua Destillata, 40.0 grammes; Eucerin Anhydric, 50.0 grammes). The alsol excels the other remedies as a disinfectant. This alsol salve is applied either smeared over the part or under a bandage. Decidedly beneficial effects followed the use of this remedy in decubitus, phlegmon, mamminitis, and contusions. An iodine eucerin salve of the following composition (Iodi Puri, 5.0 grammes; Kalii Iodi, 10.0 grammes; Eucerin Anhydr., 60.0 grammes; Aq. Destillata, 25.0 grammes) has an excellent penetrating action and is well adapted for therapeutic use in actinomyces, in wind galls, in tendinous and articular inflammations and cellulitis.—(*Berliner Tierärztliche Wochenschrift, No. 13, 1912.*)

THE STOMACH-WORM DISEASE OF SHEEP.—This disease appeared in the districts of Tüchel, Westhavelland and Ostprieignitz during the year 1909, resulting in severe losses to the owners of lambs and young sheep; old sheep were rarely attacked. The symptoms presented were those of exhaustion, anæmia, distended abdomen, fœtid diarrhœa and emaciation. On post-mortem examination the mucous coat of the fourth stomach was thickly beset with palisade worms and in a condition of chronic catarrh. With regard to treatment, the best results were obtained with creosote, one gramme, given three times daily in capsules, and later a teaspoonful of 20 per cent. creosotvasoliment, while potassium picronitricum, oil of turpentine and hæmoglobin solutions had no therapeutic value whatever.—(*Veröffentlichungen aus den Jahres-Veterinär-Berichten der beamteten Tierärzte Preussens für das Jahr. 1909, 11. Teil, S. 29, Berlin, 1912.*)

CONCERNING THE USE OF JOSORPTOL [*Chief Veterinarian Achterberg*].—The author applied josorptol in a series of cases of acute and chronic inflammations of the tendons and their sheaths, in splints, sprains and contusions in the horse. In 12 cases out of 17, recovery was rapid and a permanent cure effected. In the opinion of Achterberg the remaining cases will respond to the treatment with the exception of two, which are considered incurable. The author considers josorptol an ideal substitute for the embrocations hitherto in use; that its action is quicker and accordingly better results are obtained in a much shorter time in consequence of its deep penetrating effect. In recent affections of the above character Achterberg recommends the application of pure josorptol alone; however, in extremely chronic cases its action may be aided by the addition of the red iodide of mercury. Neither pruritis nor intense pain follow the application of josorptol, consequently this remedy is preferable to all the other sheep embrocations hitherto employed.—(*Zeitschrift für Veterinärk, 23. Jahrg., 6 Heft, S. 274.*)

THE FATE OF THE ANTHRAX GERM IN THE STABLE FILTH [*Dr. G. Roth*].—Stable filth has a decided bactericidal action on the *Bacillus anthracis*, destroying the organism in a few days. On the contrary, however, anthrax spores survive in this media for months.—(*Centralblatt für Bact. Parasitenk. und Infektionskrankheiten, 1. Abt. original, 63. Bd. 1912, Heft 4/6.*)



## CORRESPONDENCE.

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TENTH INTERNATIONAL VETERINARY CONGRESS,  
LONDON, AUGUST 3 to 8, 1914.

WASHINGTON, D. C., April 17, 1913.

*Editor AMERICAN VETERINARY REVIEW, New York City:*

DEAR SIR—The organizing committee of the Tenth International Veterinary Congress made a strong appeal to the veterinary profession of the different countries to organize national committees as early as possible in order that an appropriate propaganda may be carried on for the Congress, and thereby a large attendance assured.

In view of this and the consideration that the annual meeting of the A. V. M. A. will not take place until September, it was deemed advisable to organize without delay a national committee for the United States. At the advice of Dr. John R. Mohler, president of the A. V. M. A.; Dr. L. Van Es, who was the official representative of the Ninth International Veterinary Congress at The Hague, was asked to accept the chairmanship, to which he willingly consented, at the same time requesting me to act as the secretary of the national committee.

Dr. Van Es named the following vice-presidents for that committee: Dr. A. D. Melvin, Washington, D. C.; Dr. K. F. Meyer, Philadelphia, Pa.; Dr. C. J. Marshall, Philadelphia, Pa.; Dr. J. R. Mohler, Washington, D. C.; Dr. J. Hughes, Chicago, Ill.; Dr. W. H. Dalrymple, Baton Rouge, La.; Dr. E. C. Schroeder, Washington, D. C.; Dr. V. A. Moore, Ithaca, N. Y.; Dr. E. C. Cotton, Minneapolis, Minn.; Dr. J. S. Anderson, Seward, Neb.; Dr. S. Brenton, Detroit, Mich.; Dr. C. A. Cary, Auburn, Ala.; Dr. D. S. White, Columbus, Ohio; Dr. S. B. Nelson, Pullman, Wash.; Dr. M. Francis, College Station; Tex., and Dr. W. F. Crewe, Devils Lake, North Dakota.

With the organization completed, the committee now desires to commence their work and create a wide interest among the veterinarians of the United States, thereby securing a creditable delegation from our profession.

Sir Stewart Stockman, honorary secretary of the organizing committee, in a letter addressed to Dr. A. D. Melvin, expressed his desire to obtain at an early date the names of those who desire



to act as reporters for the various subjects to be discussed at the Congress, also at the same time inclosing a copy of the list of subjects which are to be discussed at the Tenth International Veterinary Congress. The list is prepared as follows:

#### GENERAL MEETINGS.

- (1) Foot and mouth disease.
- (2) Tuberculosis, including the relationship of the so-called types of tubercle bacilli.
- (3) Epizootic abortion.
- (4) Public control of the production, distribution and sale of milk in the interests of public health.

##### Section I. Veterinary science in relation to public health.

(1) Meat poisoning—its pathogenesis and the measures necessary to guard against it.

(2) General principles to be observed in the inspection of the carcasses and organs of tuberculous animals with a view to determining their safety as articles of human food.

(3) Disinfection of wagons.

##### Section II. Pathology and bacteriology.

(1) Johne's disease.

(2) Bovine piroplasmoses (European), with special reference to their etiology.

(3) Ultra-visible viruses.

(4) Distemper—etiology and vaccination.

##### Section III. Epizootiology.

(1) Anthrax.

(2) Swine fever.

(3) Glanders.

(4) Sarcoptic mange of the horse.

##### Section IV. Veterinary medicine and surgery.

(1) Anaesthesia—local and general.

(2) Laminitis.

(3) The surgical treatment of roaring.

(4) The use of drugs in the treatment of disease caused by nematode worms.

##### Section V. Tropical diseases.

(1) Diseases transmitted by ticks; their classification, treatment and prevention.

(2) Diseases transmitted by winged insects; their classification, treatment and prevention.

It is also planned to arrange in connection with the Tenth International Veterinary Congress a study tour for veterinarians, under the auspices of the Bureau of University Travel, the itinerary of which will include a trip through Belgium, France, Switzerland, Italy, Hungary, Austria, Germany, Holland and England, thereby affording the veterinarians desiring to attend the Congress a splendid opportunity of studying all phases pertaining to veterinary medicine in the different countries.

Such a tour will be the first undertaken by a body of veterinarians from this country and would afford splendid advantages to members of the profession affording not only pleasurable but also educational advantages, besides such a body would receive exceptional courtesies from the authorities abroad.

It is only natural that a competent director of the tour will be named who, with extensive experience in travel abroad and a knowledge of languages, will be in a position to care for the welfare of the party in the best possible way.

Hoping that the members of our profession will aid the committee in its work, and assuring those who desire further information all full attention, I am,

Very respectfully yours,

ADOLPH EICHHORN,  
Secretary.

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GOSHEN, N. Y., April 19, 1913.

*To the Editors of AMERICAN VETERINARY REVIEW, New York City, N. Y.:*

I have noticed that the various authors writing on the subject of obstetrics, and particularly those writing on the subject of contagious abortion of late, lay great stress as they should, on the removal of placenta when retained; I also note that they do not qualify their statements in any way so far as the individual cow is concerned. For the benefit of the young man who has not had experience I think writers should warn him against using even the slightest force or traction in separating the foetal membranes from the maternal contelydon in a pure bred cow.

While we may use considerable force and oftentimes disgraceful cleanliness with a grade cow, and if we follow our work with a good douching she may never miss a feed, yet if we attempt to remove a placenta from a pure bred animal where

there is perceptive adhesion it will cause us days and even weeks of worry and may cost our client the life of one of his best animals.

Text books do not lay stress on this so far as I've been able to learn; but bitter experience taught me several years ago. Our custom in all these cases in addition to putting the animal under a general tonic is to instruct our client carefully how to douche the animal daily with several gallons of mild warm anti-septic to be followed after expulsion with a liberal quantity of normal salt solution. Degeneration will gradually take place, and the membranes will be expelled, while the animal will usually retain her appetite and suffer no inconvenience. Always allow the membranes to hang out through the Os and Vagina if possible, they mechanically assist expulsion by so doing.

Yours truly,

J. F. DE VINE.

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LOS ANGELES, California, March 26, 1913.

*Editors AMERICAN VETERINARY REVIEW, NEW YORK:*

The veterinarians of Los Angeles conceived the idea of inviting the members of the profession in Southern California to join them in having Dr. L. A. Merillat of Chicago give a series of lectures and clinics in this city.

Quick responses came from Sacramento to San Diego. Arrangements were soon completed, and the doctor accompanied by Mrs. Merillat arrived in the City of the Angels on January 12.

Immediately after their arrival a fine rain appeared, which slackened practice and gladdened the hearts as only a California rain can, thus insuring a good attendance during the week.

Clinics were held every afternoon, at which ample material was on hand to demonstrate the latest and most difficult surgical operations, which the doctor did in a most instructive and entertaining manner.

He gave a lecture each evening on surgical topics, which gave us new, and brightened our old ideas, and at the end of the week, which seemed so short, all voted it a financial, educational and social success.

Yours very truly,

J. A. DELL,

Secretary and Treasurer of Committee.

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## OBITUARY.

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### ANDREW J. FERSTER, D.V.S.

Dr. Andrew J. Ferster, of New York City, met with a fatal accident on March 29 last, at the age of 30 years; when he was the victim of an automobile accident in which his wife, 26 years of age, was instantly killed. Dr. and Mrs. Ferster, accompanied by Mr. and Mrs. Arthur J. Laverty, left New York City on Saturday morning, March 29, for Warwick, N. Y., the home of Mrs. Ferster before her marriage, to spend Sunday; and when within a few miles of Middletown, a tire burst, and the machine, despite the doctor's skill and perseverance, ran into a bank at the side of the road and partly turned on its side, throwing Mrs. Ferster out, killing her instantly. When the car was brought to a halt by contact with the bank, Dr. Ferster's abdomen was jammed between the seat and the steering wheel, resulting in a perforation of some of the intestines, which caused his death on Monday afternoon, March 31, despite the fact that an operation was performed on Sunday, March 30. The doctor was unconscious nearly all the time from the time of the accident until his death, except for a few moments immediately after the accident, when he pulled his young wife from under the machine. Dr. Ferster was a graduate of the New York-American Veterinary College, class of 1905, and had been associated in practice with his father, Dr. J. H. Ferster, from the time of his graduation until his death. Dr. Ferster and his wife were buried at Warwick in the cemetery of her home town. The accident was a particularly sad one, occurring within a few miles of the home of the young wife, where they were journeying to spend their week-end; a journey from which they never returned. The veterinary profession of New York are shocked at the sudden taking away of their young colleague, whose bright countenance is still fresh in their memory, and deeply sympathize with his father in his sad bereavement.

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CHRISTOPHER R. FINNEGAN, D.V.M.

Dr. Christopher R. Finnegan died March 9, 1913, in his twenty-eighth year, of heart trouble. Dr. Finnegan was a graduate of the New York State Veterinary College, class of 1909, and since graduation had been associated with Dr. E. A. Wieland, of Buffalo, N. Y., as assistant. Buffalo was the doctor's native city, he having been born there in 1885, and his untimely death is mourned by a large circle of friends, to whom he had endeared himself by his honorable and upright life and his cheerful and affable manner. He is survived by a sister and brother, Margaret E. and Thomas Finnegan.

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FRANK E. BROOKS, V.S.

Dr. Frank E. Brooks died in Los Angeles, California, March 25, last of Bright's disease. Dr. Brooks was a graduate of the Ontario Veterinary College, back in the early '80s, and had been practising his profession in Paterson, N. J., from the time of graduation until his retirement, some time ago, when he went to Los Angeles for his health. The doctor was about 54 years of age, and a brother-in-law of Dr. J. H. Ferster, of New York.

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Dr. N. P. Whitmore, a REVIEW reader for more than 20 years, died recently at his home in Gardner, Ill.

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**Resurgam.**

It is with heartfelt sorrow and profound sympathy, that we announce the death of Mrs. George H. Berns, which occurred at her home in Brooklyn, N. Y., on Sunday afternoon, April 20, 1913.

Mrs. Berns was known to veterinarians and their families all over the country, having attended A. V. M. A. meetings regularly each year, for a great many years, and was loved by all who knew her.

Her cheerful, amiable disposition, and gentle manner, won for her, friends wherever she went, who will deeply miss her presence at future gatherings, and extend their sincere sympathy to the bereaved husband and daughter who survive her.

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## ARMY VETERINARY DEPARTMENT.

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### THE NEW PLANS FOR ARMY VETERINARY LEGISLATION.

It was the American poet Bryant who wrote:

“ Truth crush'd to earth shall rise again ;  
The eternal years of God are hers.”

This is the feeling of the profession upon army veterinary legislation. The poet, in these lines, has, in a couplet, expressed laconically and summarily the experience of the whole human race wherever it has endeavored to forward plans for moral or social betterment. All reformers can bear testimony to it. Take, for instance, the several reform bills which came up before the British Parliament to enfranchise the Jews and the laboring men during the latter half of the nineteenth century and the bill to permit Catholics to again take any office under the Crown on the same terms as Church of England men, and which finally became law—they were preceded by many years of agitation and finally became law only after series of crushing defeats. The same principle holds good in reform movements calling for statutory changes or additional organic law in any government. The military establishment of the United States and the organic law under which it works has behind it a long history. The statutory laws administered by the War Department, with its regulations and rulings concerning the army, have been built up as opportunity permitted, or when coercion could force a bill through Congress for modification or rearrangement of the military organization. Whenever, therefore, a body of men from without that organization, a medical profession, a dental profession, a veterinary profession, aims to reform that organization in one or more of its parts by substituting statutes for those now in force touching the work of any one of those professions within the War Department, to amend the statutes, or to add entirely new statutes for the betterment of its work within the military organization, it has much to reckon with. There will be rebuffs, defeats, almost disasters. There will be covert or open



antagonisms. There will be Janus-faced men to deal with—men whom, if you look on one side of their face, will be seen to be smiling, and on the other scowling; for the smile is meant for the reformer while present and the scowl for the reformer after he has left the august presence of the double-dealer. Nevertheless, the reform will come to its consummation. The truth will prevail. Crushed to earth, she shall rise again.

The veterinary profession, in its endeavor to alter and improve the military establishment of the United States at any one point, need not to expect to have any less delightful experience in its work for reform than any other profession has had. The medical profession and the dental profession, in order to bring about reforms within the military establishment and impose the scientific knowledge they possessed upon it for its own protection of life and health, actually were forced to whip into line the interested professions and battle through Congress the needed reforms. We are doing and must keep on doing the same thing until the end is accomplished. We are predestined and fore-ordained to succeed. There is nothing else possible. Because we were met with the rebuff of not getting our bill through the Sixty-second Congress ought not to deter us from getting the reform through in the Sixty-third Congress. Progressiveism is in the air. Reformers are vital men. Our plan is one of the elements of the reform movement within the military organization which is to take place under the new political regime.

Hence the Committee on Legislation of the American Veterinary Medical Association, headed by Chairman Hoskins, has again come to the front to renew the combat. He, President Mohler, Dr. Turner and Messrs. Hull and Reeve, have had conferences in Washington of late to redraft the Army Veterinary Service Bill, subject to the approval of Mr. Hay, Chairman of the Committee on Military Affairs of the House of Representatives and Major-General Aleshire, Chief of the Quartermaster Corps of the army. The new bill will bear the grade of captain as the highest rank obtainable by a veterinarian under its terms, a point which Major-General Leonard Wood, Chief of Staff, conceded should be in the bill. The new measure will also provide for retirement of those in the Quartermaster Corps who may be, or may become, past the age limit at which it is customary to retire, or because of failure to pass examinations. It will give credit to those with more than fifteen years' service, on examination, promoting them, as we understand the plan, to the higher grades.

After careful consideration and common agreement, the re-cast bill will be prepared and introduced into the House in the extra ("extraordinary") session, which began April 7th, if opportunity permits of this, even if the bill so introduced cannot be acted upon in the extra session, but must lie over until the regular sessions in the autumn.

It is fortunate that Chairman Hoskins and his committee will continue to hold office at least until next September, when the fiftieth anniversary of the A. V. M. A. occurs in New York City. He and his colleagues of the committee are as full of fight as ever. He has been deluged with letters requesting him not to halt in the work, and he will remain the general of the veterinary forces in the campaign as before. It is conceded by all that Dr. Hoskins combines within himself, because of his political gifts, accomplishments and experience, just the elements which will make for success in this reform. His vast acquaintance with men in the party now in office, from the President down; his wide circle of friendships in his profession; his acuteness in measuring political situations; his subtlety in discovering the secret sources of hindrance; his adroitness in attempted circumvention, all have proclaimed him a master in practical politics. If he cannot lead us to victory at last, no one, as far as is now known, can. It is twice fortunate that at this time the reform movement has the friendship of Mr. Hay, that knightly man, Chairman of the House Committee on Military Affairs. Anyone who has read the eighteen-column printed report of the debate on the floor of the House, January 6th last, when the bill was voted through by unanimous consent, will know that Mr. Hay deserves to be enthroned in our hearts for the regal way in which he championed the measure. If we had a man in the Senate Military Committee who as heartily advocated and defended this reform as Mr. Hay of the House Military Committee, the profession by this time would have come to its own.

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#### ARMY VETERINARY NOTES.

Every veterinarian in the army, connected with the army, or who has ever been connected with it, as well as numerous militant supporters of army veterinary service reform, within the profession and outside of it, are thinking about the new plans for veterinary legislation in the extra session of Congress. All such should write to Dr. W. Horace Hoskins, 3452 Ludlow

street, Philadelphia, Pa., giving to him such suggestions as occur to them; conveying to him such information as they may possess which will throw more light on the legislative problem; adding such expressions of encouragement and loyalty as their own valiance commands them to utter. Army veterinary legislation may seem to be in the doldrums. The bill is for the moment becalmed. This is the time when the word of encouragement is golden.

Dr. Schwarzkopf, of the 3d Cavalry, and Mrs. Schwarzkopf returned to America in February, after a foreign tour in France, Germany and Austria. They are again at Fort Sam Houston, Texas. Dr. Gratzman, of the 15th Cavalry, accompanied Dr. Schwarzkopf on part of his trip and has now returned to his regiment at Fort Sheridan, Ill. Their many friends bid them welcome on their return.

The mobilization of the troops in Galveston and Texas City, Texas, has thrown together in camp a number of army veterinarians who otherwise might not have met as a group, and has been fortuitous in permitting conferences on the topic of army veterinary service legislation. The group consists of Drs. Le May and Power, 4th Field Artillery; Uri and Hanvey, 6th Cavalry; D. Arthur Hughes, Commissary Branch of the Quartermaster Corps; Barber, of the Quartermaster Corps, from Fort Leavenworth, and there are also in camp three temporary appointees of the Quartermaster Corps. Conferences have been held of the group, or part of it, frequently, and will doubtless continue to be held, as was the case in the San Antonio maneuvers two years ago. As the plan of our professional representations in Washington and Philadelphia is to redraft the bill which failed of passage, but not greatly to alter it, the work of the conferences at Texas City is not initiatory nor to consider formulation of a bill, as was the case at San Antonio. Nevertheless, the interest in the proposed legislation is as intense as that in the last maneuvers, and the remarks penetrative as well as pertinent. The discussion has centered on four points. First, the advisability of reincorporating the plan to have all honorable prior service in the War Department as veterinarians count in determination of a man's status. This point was not omitted in the bill as originally introduced by Mr. Difenderfer, January, 1912. Second, the idea was broached that some wording might be reincorporated in the bill making some provision for a man at the top, if that be possible. Some thought he might be called a veterinary adviser to the War Department and might

be given the salary of the next higher grade while he holds office, if not the rank. A level-headed man in such a position could do a world of good to the veterinarians in the army and this would redound to general professional good. Third, the opinion was held that retirement, according to the scheme under which *permanent* commissioned officers of the army work, should be a feature of the bill. Fourth, a warm discussion arose upon the question of whether our leanings as a body were towards the Quartermaster Corps or the Medical Corps. The conferences might be called a "round table" discussion on the army veterinary service and the legislation needful. They were preliminary and looked towards the arrival in camp of more definite information of the proposed plans of the Committee on Legislation of the American Veterinary Medical Association.

D. ARTHUR HUGHES,

Veterinarian, Quartermaster Corps, Depot  
Quartermaster's Office, Galveston, Tex.

MCDONOUGH DOCTRINES WINNING THEIR WAY.—The following clipping from the column of "Veterinary and Other Inquiries" in a recent number of the *Breeder's Gazette* would seem to indicate that the doctrines that our good friend Dr. Jas. McDonough, of Montclair, N. J., has been preaching for some years in his own state, and which he placed so forcefully before the American Veterinary Medical Association at Indianapolis last August (published in March REVIEW), were destined to become accepted as universal knowledge: "*Shoeing*—C. O. W. Platteville, Wis.: "Which is the best way to shoe a horse that is inclined to knuckle? Should a curby horse be shod with high heels?" Reply: "In all cases the hoof should be made level and kept level. The shoe should not have high heels. In knuckling, which often indicates hock lameness, have the smith put a side calkin on the shoe between the toe and heel calkin, on each side."

NEW YORK STATE MAN APPRECIATES THE PRACTICAL ARTICLES IN THE REVIEW.—He says in renewing his subscription: "Wishing you health and happiness, and success for your efforts in producing so excellent a journal as the AMERICAN VETERINARY REVIEW. The practical articles it contains are of great benefit to the busy practitioner."

## SOCIETY MEETINGS.

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### VETERINARY MEDICAL ASSOCIATION OF NEW YORK CITY.

The regular monthly meeting of this association was held in the lecture room of the New York-American Veterinary College, on Wednesday evening, April 2, Dr. McKinney presiding.

The minutes of the March meeting were read and approved.

The Prosecuting Committee reported progress.

The president then called on Dr. Jas. McDonough, of Montclair, New Jersey, to address the association on the subject of horse-shoeing.

Before Dr. McDonough opened his address Dr. E. B. Ackerman stated that there was to be a debate on hoof expanders between Dr. Roberge and Dr. McDonough, but Dr. McDonough stated that Dr. Roberge had declined to enter the discussion.

Dr. McDonough then gave a very interesting and instructive address on horse-shoeing.

The doctor stated that both heels of a shoe should be equidistant from the center of the foot and as nearly the same bearing should be placed on the wall as in the unshod foot. The heel that most closely approaches the center of the foot takes the most weight. The unshod foot has a greater width at the quarters than any other place.

The New Jersey Veterinary Medical Association appointed a committee of three to examine horses' limbs to determine the degree of soundness.

One hundred and six horses were examined and four hundred and twelve exostoses were found.

Three hundred and ninety-eight were on the sides of the limbs. Fourteen in front at the knee. Two with both hocks free from spavin. Ten with one hock free from spavin, and the remainder showed symptoms of spavin.

One hundred and fifteen legs showed signs of knuckling.

About forty of these animals were used for delivering milk, which is work of such a nature as not to cause injury.



The doctor advocates the use of a five-caulk shoe, the extra caulks being placed under the quarters and supporting the same. The use of the three-caulk shoe which does not support the quarters places a severe strain on the ligaments and other structures of the articulations above the foot, thereby causing injury.

Never use a three-caulk shoe in any case of hock lameness. Always provide support for the quarters.

Dr. Berns made some remarks and spoke in favor of the five-caulk shoe, and asked Dr. McDonough his opinion of rubber pads. Dr. McDonough replied that they are one of the greatest boons to horse flesh ever invented.

Dr. Ackerman asked about the "Goodenough" shoe, and the doctor replied that while the ground surface is good, the first caulk is too far from the heel, and the punching is bad—too straight.

Dr. Gill brought out the point that it is necessary to maintain the obliquity of the wall in balancing a foot.

Dr. Clayton asked why in the most of cases the outside of a shoe is worn the most, and gave it as his opinion that it is due to improper shoeing at first. Dr. McDonough said it is due to the outside wall being the longest.

Dr. DeVine asked why corns are mostly found on the inside heels.

Dr. McDonough said that it is due to contraction of the inside quarter bringing it more nearly the center of the foot, therefore causing it to take more weight which forces the quarter up causing injury to the sensitive structures.

On being asked which he preferred hot or cold fitting of shoes the doctor emphatically declared himself in favor of red hot fitting as giving the best results.

Dr. Cochran, on being asked his opinion of shoeing horses, summed it up in a few words by saying: "Make your horse walk level and he will go right."

A unanimous vote of thanks was tendered Dr. McDonough.

A representative of the Horse Aid Society invited all the members and visitors to attend the lectures on horse shoeing and other subjects given at the Society's rooms, 164 West Eighteenth street, New York City, every Thursday evening.

Dr. Gill then announced that by request of the chairman of the local Committee of Arrangements of the A. V. M. A. contributions to the entertainment fund were earnestly solicited.

Dr. Berns supplemented Dr. Gill's remarks and stated that



the meeting this year would be beyond doubt the largest ever held, and a large sum of money would be necessary to defray the various expenses of entertainment.

Dr. T. E. Smith spoke in favor of this fund being raised locally.

Dr. Ellis stated that each and every member should deem it a privilege to contribute to so worthy an object.

The resolutions in regard to increasing the efficiency of the Department of Health as adopted at the March meeting, were read by the secretary.

A resume of Assembly bills 2187 and 2188 was also read.

Dr. DeVine spoke as being highly in favor of these bills and suggested that a committee be appointed to confer with the Commissioner of Agriculture with full power to act for this association.

It was regularly moved, seconded, and carried, that such a committee be appointed—carried.

The president appointed Drs. Ellis, Clayton and Gill.

Drs. Chas. P. Martin and John L. Leonard were unanimously elected to membership in the association.

No further business appearing the meeting adjourned.

R. S. MACKELLAR,  
Secretary.

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#### RESOLUTIONS PASSED BY THE VETERINARY MEDICAL ASSOCIATION OF NEW YORK CITY.

At a meeting of the Veterinary Medical Association of New York City, held on March 5, 1913, the following resolutions were adopted:

Whereas, The Veterinary Medical Association of New York City is desirous of increasing the efficiency of the Department of Health and also of securing for the veterinary profession fitting recognition in its legitimate sphere, and

Whereas, The Department of Health exercises jurisdiction through divisions in charge of physicians or laymen over the diseases of animals communicable in various ways to human beings, and

Whereas, In the United States Department of Agriculture over intercommunicable diseases, inspection of meat, milk and dairies is delegated to the Bureau of Animal Industry, presided over by a chief, who is a veterinarian, and

Whereas, It is believed that the advice of an accomplished veterinarian on these and similar subjects would be of great value to the Department of Health; therefore be it

Resolved, That we respectfully suggest the appointment of a veterinarian, having an especial knowledge of sanitary medicine, whose duties should include a study of advanced methods of meat and dairy inspection, and control of intercommunicable diseases, and who should act in an advisory capacity to the Department on the aforesaid subject as does the general medical officer of the Department advise in relation to the communicable diseases of humans; and be it further

Resolved, That a copy of these resolutions, signed by the President and Secretary of the Association, be submitted to the Commissioner of Health.

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#### PHILIPPINE VETERINARY MEDICAL ASSOCIATION, MANILA.

The fifth annual meeting of this association was held in the Young Men's Christian Association building, Manila, on Friday, February 7, 1913.

The president, Dr. Joseph R. Jefferis, Veterinarian, Seventh Cavalry, U. S. Army, called the meeting to order at 9.30 a. m. Since the minutes of the last meeting were published, it was not considered necessary to have them read before the association.

A short address of welcome was delivered by the Hon. Newton W. Gilbert, Vice-Governor and Secretary of Public Instruction of the Philippine Islands, in which he enumerated the difficulties that the veterinarians in the Bureau of Agriculture are having in enforcing an efficient quarantine against rinderpest throughout the archipelago. He also stated that the veterinarians occupy a very delicate position, which often requires a large amount of diplomacy; and his earnest desire is that they try their utmost to gain the confidence of the Filipino people. Dr. Jefferis responded.

Dr. C. H. Decker read a paper on rinderpest in the Amurayan Valley and Dr. J. D. Reardon a paper on rinderpest quarantine in the Province of La Union. They cited their experiences and some of the interesting results obtained in eradicating this disease.

Mr. M. B. Mitzmain, Veterinary Entomologist, Bureau of

Agriculture, read a paper on the entomological factors concerned in the measures required for the control of surra. Mr. Mitzmain is working on the transmission of surra at the Alabang Research Laboratory and stated that he has found *Tabanus striatus* to be an agent in the transmission of the trypanosomes of surra. This paper stimulated a lively discussion on the various phases of the disease.

Dr. R. W. Newcomb read a paper entitled "Kidney Worm Infestation of Swine as Shown Post Mortem at the Manila Matadero." The worm (*Stephanurus dentatus*) was found by Dr. Newcomb in 50 per cent. of the animals slaughtered.

Dr. W. H. Boynton, Pathologist, Bureau of Agriculture, gave a short lecture on the diagnosis of rinderpest by blood examination, illustrating his talk by charts. Dr. Boynton also said that he has found leeches to suck blood and carry the infection for more than three days.

Dr. C. H. Schultz, who read an instructive paper entitled "Observations on the Diagnosis of Glanders," is also working at the Veterinary Research Laboratory at Alabang.

A report by Dr. C. G. Thomson on the rinderpest campaign on the Island of Panay was read by Dr. Archibald R. Ward, Chief Veterinarian, Bureau of Agriculture. This gave in detail the methods employed in that district.

Dr. T. T. Hartman prepared a paper on the quarantine and tie-up in the northern district of Iloilo Province. It was impossible for Dr. Hartman to attend the meeting, and the paper was read by the Secretary.

The meeting then went into business session, and the following officers were elected: President, Dr. F. C. Gearhart, Chief of the Division of Animal Husbandry, Bureau of Agriculture; vice-president, Dr. A. G. Donovan, Veterinarian, First Field Artillery, U. S. Army; secretary-treasurer, Dr. R. W. Newcomb.

It was decided to give a banquet at the Army and Navy Club on the same evening.

The following members of the association were present at the meeting: Drs. A. R. Ward, Joseph Jefferis, A. G. Donovan, A. S. Shealy, Stanton Youngberg, C. H. Leavitt, Lyman Bishop, W. W. Richard, R. W. Newcomb, F. W. Wood, C. H. Schultz, W. H. Boynton, J. A. Thompson, D. W. Shaffer, W. J. Palmer, A. H. Julien, C. H. Decker, J. D. Reardon, W. A. Korb, J. R. Burns, H. F. Hungerford, H. F. Kern, L. W. Fisher, A. M. Meade, J. L. Gross, W. L. Davis, W. K. Howard, W. A. Kliphardt, C. C. Middleton, D. F. Coyner, Victor Buencamino, W.

A. Curtis, F. C. Gearhart, Alvin Broerman. Six visitors attended the meeting.

The meeting was adjourned to convene at the call of the president.

ALVIN BROERMAN, Secretary-Treasurer.

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### CONNECTICUT VETERINARY MEDICAL ASSOCIATION.

The annual meeting of the above association was held in Hartford, at Hotel Garde, Tuesday, February 4, 1913. Meeting was called to order by President Underhill at 11 a. m. Members present: Drs. Thos. Bland, H. E. Bates, C. H. Beere, G. T. Crowley, C. L. Colton, G. E. Corwin, Jr., B. K. Dow, P. F. Finnigan, V. M. Knapp, P. T. Keeley, G. W. Loveland, W. J. Southey, H. L. Tower, J. E. Underhill, H. Whitney; honorary member, H. O. Averill. Visitors: Drs. I. R. Vail, J. J. Moynahan, A. W. Sutherland, J. J. Flaherty.

Reports of secretary and the treasurer were read and accepted. The Board of Censors reported favorably on the application of J. J. Moynahan, I. R. Vail, J. J. Flaherty, A. W. Sutherland, F. D. Coles, and E. R. Dimock. The report was accepted, and the applicants elected to membership in the association.

The following officers were elected for the ensuing year: President, Dr. Harrison Whitney, New Haven; first vice-president, Dr. G. T. Crowley, New Britain; second vice-president, Dr. C. L. Colton, Hartford; secretary, Dr. B. K. Dow, Willimantic; treasurer, Dr. Thos. Bland, Waterbury. Board of Censors: Drs. G. W. Loveland, chairman; W. J. Southey, P. T. Keeley, H. L. Tower and V. M. Knapp.

It was voted to hold the semi-annual meeting in Waterbury, at Dr. Bland's hospital, Wednesday, August 6, 1913. The meeting will consist of the reading and discussion of scientific papers and a short clinic with interesting and instructive cases. President Whitney announced that Drs. Gilyard, Moynahan and Tower would have papers on professional topics, to present at that meeting. Meeting adjourned at 4.30 in the afternoon.

B. K. Dow,  
Secretary.

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KEYSTONE VETERINARY MEDICAL ASSOCIATION.

The regular monthly meeting of the Keystone V.M.A. was held April 11th, with President Yunker in chair; sixteen members responded to roll call. The programme of the evening consisted of a paper by Dr. W. S. Gillespie on "Milk Inspection in Pennsylvania." This gave a resume of the work done by the State Livestock Sanitary Board since the inception of this work. Dr. Cheston M. Hoskins reported a case of Tubercular Myocarditis in bull terrier.

Dr. W. Horace Hoskins reported that the Army Bill would be brought before the U. S. Senate during the present session of Congress, and he felt assured of its passage. The bill is to be presented the same as was when it passed the House save for the following changes:

At the end of Section 3: "That after fifteen years of service an assistant veterinarian shall be promoted to veterinarian with the rank, pay, and allowances of Captain, mounted; after having passed necessary examinations, etc."

At the end of Section 4: "That the veterinarians now in the Army with fifteen years of service be reappointed and commissioned as veterinarians with the rank, pay, and allowances of Captain, mounted after having passed necessary examinations, etc."

CHESTON M. HOSKINS,  
Secretary-Treasurer.

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HORSE DEALERS OPTIMISTIC.—Under this caption *The Rider and Driver* gives the following, including the names of six of New York's most prominent dealers and their views on the outlook for the spring trade, which is promising indeed, most of them stating that they have filled every stall in anticipation:

"A recent canvass of the New York dealers in horses by the *Herald* has resulted in very optimistic reports. Not in five years have the leading dealers opened the spring season with so many finished horses as they will have this year, says the *Herald*. The stock market, which usually reflects conditions in this branch of the horse market, has presented anything but a favorable aspect in the last few months, yet the men in the trade seem to be confident of prosperous times close ahead of them and have stocked their stables accordingly. Presumably they believe that in stocks and in horses low-water mark has been reached, and that conditions are almost ripe for a big improvement in business."

## NEWS AND ITEMS.

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THE COLORADO VETERINARY MEDICAL ASSOCIATION will hold its next meeting at Fort Collins, May 28 and 29, where an extended programme will be enacted. A full attendance is anticipated.

DR. F. H. MCNAIR, BERKELEY, CALIFORNIA, RETURNS TO WORK AFTER A SUCCESSFUL OPERATION FOR APPENDICITIS and a rest in the mountains for a few weeks, feeling quite himself again. We congratulate the doctor, and wish him continued good health.

DR. CLARK F. HARTMAN HAS BEEN TRANSFERRED from Ponce, Porto Rico, to San Juan, Porto Rico, and promoted from Inspector to Acting Chief, Division of Veterinary Inspection of Porto Rico. We congratulate the doctor on this recognition of his worth.

THIRTY-FIVE ESSAYS ON TUBERCULOSIS were presented by the public school pupils in Lawrence, Mass., which they had been given six weeks to prepare. The essays were read to three judges separately, each one selecting the best in his opinion; and it transpired that each of the three judges, had picked the three essays which were awarded the prizes. The judges were City Physician Geo. W. Dow, Veterinarian John F. Winchester and Dr. C. G. Carlton, all of whom had made a special study of tuberculosis.

THE ONTARIO VETERINARY COLLEGE held its closing exercises on April 25 at Convocation Hall, University of Toronto. Hon. James S. Duff, Minister of Agriculture, opened and presided over the exercises, which were begun with an address from Principal Grange, introducing the graduating class. Minister Duff presented the diplomas. An address then followed by President R. A. Falconer, of the University of Toronto. Certificates of the Science Association of the O. V. C. were then presented; and finally the presentation to the college of the graduating class picture was made by Mr. W. W. Forsyth, president of the class.

### EXPRESSIONS OF APPRECIATION OF NATIONAL SECRETARY HOSKINS' EFFORTS.

Glad to hear of the good condition of the Alpha Psi. I would not be without by Alpha Psi Directory for anything. It



was almost like talking to an old classmate. I am sure that I have received much good from reading through mine.—J. A. ABART, Columbus, Neb.

I received the Directory and, as others say, it sure is very interesting. I am more than pleased with the progress of the Alpha Psi.—C. H. BURDETT, Centralia, Kan.

I received the Alpha Psi Directory. It is a pleasure to look it over and see the names of so many whom I know as honorary members.—J. H. BLATTENBERG, Lima, Ohio.

I have just received a copy of the Alpha Psi Directory which I am very glad to have. You have gotten out an attractive book. I can appreciate the amount of labor it has been to publish it.—S. H. BURNETT, Ithaca, N. Y.

The Directory arrived a few days ago, and upon careful examination I truly cannot see how it could possibly be improved upon.—W. J. CROCKER, Philadelphia, Pa.

It pleases me greatly to hear that this book is ready for distribution, not only from the standpoint of advantage, but that of advancement of the fraternal brotherhood.—LAWRENCE W. FISHER, Manila, P. I.

I received a copy of the Directory. I enjoyed it very much and received no small amount of benefit, as well as pleasure, from same. Good luck, and may the good work go on.—W. LESTER HOLLISTER, Avon, Ill.

The Directory is something which has long been needed, and I believe it has been appreciated by those who have received same.—OTTO E. JUNG, Oklahoma City, Okla.

I think that the Alpha Psi Directory is one of the best things that ever happened for our Fraternity. I want to congratulate the national officers on the good work that they are doing.—EDWIN R. JACKSON, Buffalo, N. Y.

I received the Directory and greeted it with almost as much pleasure as I would a former classmate.—P. W. MILLER, Akron, Ohio.

I think the Directory a splendid idea.—CYRUS D. WHITE, Georgetown, Ill.

There are two reasons why every member should get a copy of the Directory. One is that the National Council was necessarily at a great expense in preparing this, and they have put the price down to fifty cents expecting that every member would order a copy, for the Directory is certainly thoroughly prepared and is worth several times the price asked. Another reason why every one should have a copy is that it is a very complete and

accurate account of the organizing and building of the Fraternity, and gives the names and addresses of every active, graduate and honorable member of each chapter.—A. LOUIS DANFORTH, Goshen, N. Y.

**VETERINARY SCIENCE TO FORM PART OF PREPARATORY COURSE FITTING MEN TO TEACH AGRICULTURE IN THE HIGH SCHOOLS.**—The faculty of the College of Agriculture of the University of Wisconsin have approved a study schedule, designed for students who wish to procure state teacher's certificates entitling them to teach agriculture in the high schools. Included in this list of subjects are two courses in veterinary science. This is a decided step in advance and will unquestionably bring the veterinarian and the farmer closer together and result in mutual benefits.

**DR. SHAW, VICTIM OF RECENT FLOOD IN OHIO.**—Dr. Walter Shaw, of Dayton, Ohio, president of the Ohio State Board of Veterinary Examiners, suffered a heavy loss in the recent flood. The water rushed through his hospital, eight feet, four inches deep with a velocity sufficient to sweep everything out of it.

Among the household goods that were destroyed was his library, including a twenty-seven years' accumulation of *AMERICAN VETERINARY REVIEWS*, which he deeply regrets because of his inability to replace them. The *REVIEW* expresses its deep sympathy for Dr. Shaw's misfortune and losses.

**NEWLY APPOINTED STATE BOARD ELECT OFFICERS.**—The newly appointed state board of veterinary examiners for Oklahoma held a meeting in Oklahoma City on April 9, 1913, and elected the following officers: President, C. R. Walter, Tulsa; vice-president, W. F. Hall, Holdenville; secretary, Geo. Pugh, Lawton; treasurer, O. D. Chedester, Cordell; the fifth member of the board being F. W. Cook, Clinton.

For all information in regard to registration, address Dr. Geo. Pugh, Secretary, Lawton, Okla. No examination is required until after June 30, 1913, of any applicant who can show satisfactory proof of having practised in Oklahoma for compensation for a period of at least two years prior to time of registration. Graduates from reputable veterinary schools may register without preliminary period of practice in the state.

**NEW VETERINARY ASSOCIATION FORMED IN MISSOURI.**—On the evening of April 8, at the Hotel Robidean, a number of

prominent veterinarians of Buchanan County met and organized the Buchanan County Veterinary Association, with the following set of officers: President, Dr. Graham; vice-president, Dr. Rainey; secretary, Dr. Caldwell; treasurer, Dr. Schirmer. Fifteen veterinarians responded to the call, and were present at the organization of this new working body, which will hold monthly meetings in St. Joseph and vicinity to wrestle with the problems that confront progressive veterinarians everywhere. We wish them success in this laudable undertaking.

FIFTIETH ANNIVERSARY OF THE FOUNDING OF THE ONTARIO VETERINARY COLLEGE CELEBRATED.—As per the announcement in our April number, the above institution celebrated its fiftieth anniversary on April 10, when a large gathering, consisting of members of the faculty, graduates and a number of distinguished guests, gathered at Convocation Hall, University of Toronto. Dr. C. C. James, Special Commissioner of Agriculture for the Dominion Government, represented that department. Dr. James spoke of the transition of the Ontario Veterinary College from a private institution to one under the guidance of the Government, in a most interesting manner. Principal Grange spoke on "The New Era in Veterinary Science," in which he covered the ground which he so interestingly passed over in his address before the Veterinary Medical Association of New York City at its March meeting (an outline of which is given in our April number, pages 120-121), and went much further along that line, finally leading up to the extended courses for which that college is preparing. A very interesting address was given by Dr. D. King Smith, son of Prof. Andrew Smith, founder of the school, on "The College from 1862 to 1908," in which he included a short sketch of the career of his father in connection with the college. Dr. Fred. Torrence, Veterinary Director General, of the Dominion of Canada, after speaking in eulogy of Prof. Andrew Smith, of the Ontario Veterinary College, and Prof. Duncan McEachren, of the Montreal Veterinary School, discussed the work that comes under his department; and predicted that the time would come when the once common disease of glanders in the Dominion, would be unknown, through the careful isolation of animals suffering from it. "The Cause of Contagious Disease," was then discussed by Dr. John Amyot. President Falconer, of the University of Toronto, brought the ceremonies to a close in a most interesting congratulatory address.



## VETERINARY MEDICAL ASSOCIATION MEETINGS.

In the accompanying table the data given is reported by many Secretaries as being of great value to their Associations, and it is to be regretted that some neglect to inform us of the dates and places of their meetings.

Secretaries are earnestly requested to see that their organizations are properly included in the following list :

Name of Organization.	Date of Next Meeting.	Place of Meeting.	Name and Address Secretary.
Alabama Veterinary Med. Ass'n	August, 1913.	Auburn.	C. A. Cary, Auburn.
Alumni Ass'n, N. Y.-A. V. C.	April, 1913.	141 W. 54th St.	J. F. Carey, East Orange, N. J.
American V. M. Ass'n	Sept. 1-2-3-4-5, 1913.	New York, N. Y.	C. J. Marshall, Philadelphia.
Arkansas Veterinary Ass'n	January, 1914.	Ft. Smith.	J. B. Arthur, Russellville.
Ass'n Médécalle Veterinaire Française.	1st and 3d Thur. of	Lec. Room, La-	
"Laval"	each month.	val Un'y, Mon.	J. P. A. Houde, Montreal.
B. A. I. Vet. In. A., Chicago.	2d Fri. each month.	Chicago.	H. A. Smith, Chicago, Ill.
B. A. I. Vet. In. A., So. Omaha.	3d Mon. each month.	S. Omaha, Neb.	E. J. Jackson, So. Omaha.
Buchanan Co. Vet. Ass'n.	Monthly.	St. Joseph and vicinity.	
California State V. M. Ass'n	June 11, 1913.	Los Angeles.	F. W. Caldwell, St. Joseph, Mo.
Central Canada V. Ass'n.	Feb. and July.	Ottawa.	John F. McKenna, Fresno.
Central N. Y. Vet. Med. Ass'n.	June and Nov.	Syracuse.	A. E. James, Ottawa.
Chicago Veterinary Society.	2d Tues. each month.	Chicago.	W. B. Switzer, Oswego.
Colorado State V. M. Ass'n.	May 28-29, 1913.	Ft. Collins.	D. M. Campbell, Chicago.
Connecticut V. M. Ass'n.	August 6, 1913.	Waterbury.	I. E. Newsom, Ft. Collins.
Delaware State Vet. Society.	Jan., Apl., July, Oct.	Wilmington.	B. K. Dow, Willimantic.
Essex Co. (N. J.) V. M. A.	3d Mon. each month.	Newark, N. J.	A. S. Houchin, Newark, Del.
Genesee Valley V. M. Ass'n.	2d week, July, 1913.	Rochester.	J. F. Carey, East Orange, N. J.
Georgia State V. M. A.		Atlanta.	J. H. Taylor, Henrietta.
V. M. A. of Geo. Wash. Un'y.	2d Sat. each month.	Wash., D. C.	P. F. Bahnsen, Americus.
Hamilton Co. (Ohio) V. A.			A. T. Ayers.
Illinois State V. M. Ass'n.	July 10, 1913.	Springfield.	Louis P. Cook, Cincinnati.
Indiana Veterinary Association.	Jan. 14, 1914.	Indianapolis.	L. A. Merrill, Chicago.
Iowa Veterinary Ass'n.	Pending.	Pending.	A. F. Nelson, Indianapolis.
Kansas State V. M. Ass'n.	Pending.	Pending.	C. H. Stange, Ames.
Kentucky V. M. Ass'n.	Oct. & Feb. each year.	Lexington.	J. H. Burt, Manhattan.
Keystone V. M. Ass'n.	2d Tues. each month.	Philadelphia.	Robert Graham, Lexington.
Lake Erie V. M. Association.	Pending.	Pending.	Cheston M. Hoskins.
Louisiana State V. M. Ass'n.	Sept., 1913.	Lake Charles.	Phil. H. Fulstow, Norwalk, Ohio.
Maine Vet. Med. Ass'n.	Jan., 1913.	Augusta.	Hamlet Moore, New Orleans, La.
Maryland State Vet. Society.		Baltimore.	C. W. Watson, Brunswick.
Massachusetts Vet. Ass'n.	4th Wed. each month.	Young's, Boston.	H. H. Counselman, Sec'y.
Michigan State V. M. Ass'n.	Feb. 3, 4, 1914.	Lansing.	J. H. Scale, Salem.
Minnesota State V. M. Ass'n.	July 9, 10, 1913.	Albert Lea.	W. A. Ewalt, Mt. Clemens.
Mississippi State V. M. Ass'n.	Aug. 29, 1913.	Starkville.	G. Ed. Leech, Winona.
Missouri Valley V. Ass'n.	July, 1913.	Omaha.	Wm. F. Ferguson, Grenada.
Missouri Vet. Med. Ass'n.	July, 1913.	Kirksville.	Hal. C. Simpson, Denison, Ia.
Montana State V. M. A.	Sept. 24, 25, 1913.	Helena.	S. Stewart, Kansas City.
Nebraska V. M. Ass'n.	1st Mo. & Tu., Dec. '13	Lincoln, Neb.	A. D. Knowles, Livingston.
New York S. V. M. Soc'y.	1st week Sept., 1913.	New York.	Carl J. Norden, Nebraska City.
North Carolina V. M. Ass'n.	June, 1913.	Salisbury.	H. J. Milks, Ithaca, N. Y.
North Dakota V. M. Ass'n.	July 1, 2, 3, 1913.	Fargo.	M. J. Ragland, Salisbury.
North-Western Ohio V. M. A.	Feb. and Nov.	Klima.	C. H. Babcock, New Rockford.
Ohio State V. M. Ass'n.	Jan. 14, 15, 1914.	Columbus.	A. J. Kline, Wauseon.
Ohio Soc. of Comparative Med.	Annually.	Upper Sandusky.	Reuben Hilty, Toledo.
Ohio Valley Vet. Med. Ass'n.			F. F. Sheets, Van Wert, Ohio.
Oklahoma V. M. Ass'n.	Fall, 1913.	Oklahoma City.	J. C. Howard, Sullivan.
Ontario Vet. Ass'n.	Pending.	Toronto.	C. E. Steel, Oklahoma City.
Pennsylvania State V. M. A.	Sept. 16, 1913.	Not selected.	C. H. Sweetapple, Toronto.
Philippine V. M. A.	Call of President.	Manila.	John Reichel, Glenolden.
Portland Vet. Med. Ass'n.	4th Tues. each month.	Portland, Ore.	David C. Kretzer, Manila.
Province of Quebec V. M. A.		Mon. and Que.	Sam. B. Foster, Portland, Ore.
Rhode Island V. M. Ass'n.	Jan. and June.	Providence.	Gustave Boyer, Rigaud, P. Q.
South Carolina Ass'n of Veter's.	Pending.	Pending.	J. S. Pollard, Providence.
South Illinois V. M. and Surg. Ass'n.	Aug. 5-6-7, 1913.	Fillmore.	B. K. McInnes, Charleston.
St. Louis Soc. of Vet. Inspectors.	1st Wed. fol. the 2d		F. Hockman, Iowa.
Schuykill Valley V. M. A.	Sun. each month.	St. Louis.	
Soc. Vet. Alumni Univ. Penn.	June 18, 1913.	Reading.	Wm. T. Conway, St. Louis, Mo.
South Dakota V. M. A.	July 8, 9, 1913.	Philadelphia.	W. G. Huyett, Wernersville.
Southern Auxiliary of California State V. M. Ass'n.		Mitchell.	B. T. Woodward, Wash., D. C.
South St. Joseph Ass'n of Vet. Insps.	Jan., Apl., July, Oct.	Los Angeles.	S. W. Allen, Watertown.
Tennessee Vet. Med. Ass'n.	4th Tues. each month	407 Illinois Ave.	J. A. Dell, Los Angeles.
Texas V. M. Ass'n.	November, 1913.	Memphis.	H. R. Collins, South St. Joseph.
Twin City V. M. Ass'n.	Pending.	Pending.	O. L. McMahon, Columbia.
Utah Vet. Med. Ass'n.	2d Thu. each month.	St. P.-Minneap.	Allen J. Foster, Marshalltown.
Vermont Vet. Med. Ass'n.	Pending.	Pending.	S. H. Ward, St. Paul, Minn.
Veterinary Ass'n of Alberta.			A. J. Webb, Layton.
Vet. Ass'n Dist. of Columbia.	3d Wed. each month.	514 9th St., N.W.	G. T. Stevenson, Burlington.
Vet. Ass'n of Manitoba.	Feb. & July each yr.	Winnipeg.	C. H. H. Sweetapple, For. Saskat-
Vet. Med. Ass'n of N. J.	July 10, 1913.	Jersey City.	chewan, Alta., Can.
V. M. Ass'n, New York City.	1st Wed. each month.	141 W. 54th St.	M. Page Smith, Washington, D. C.
Veterinary Practitioners' Club.	Monthly.	Jersey City.	Wm. Hilton, Winnipeg.
Virginia State V. M. Ass'n.	July 10, 1913.	Old Point Comf't	E. L. Loblein, New Brunswick.
Washington State Col. V. M. A.	1st & 3d Fri. Eve.	Pullman.	R. S. MacKellar, N. Y. City.
Washington State V. M. A.	June 19, 20, 1913.	Wenatchee.	A. F. Mount, Jersey City.
Western Penn. V. M. Ass'n.	3d Thu. each month.	Pittsburgh.	Geo. C. Faville, North Emporia.
Wisconsin Soc. Vet. Grad.	Pending.	Pending.	R. J. Donohue, Pullman.
York Co. (Pa.) V. M. A.	June, Sept., Dec., Mar.	York.	Carl Cosier, Bellingham.
			Benjamin Gunner, Sewickley.
			J. P. West, Madison.
			E. S. Bausticker, York, Pa.



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AFTER THREE SCORE YEARS AND MORE, the reliable firm of Eimer and Amend are still leaders in the drug trade, and continue to enjoy not only the reputation of having everything called for in the line of drugs, glassware, weights and measures and in fact any and everything wanted to supply a pharmacy, but also the confidence of their customers in regard to the quality of their goods. See announcement on page 23 (Adv. Dept.)

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Sworn to and subscribed before me this 27th day of March, 1913.

MOSES MORRIS, Notary Public,

(Seal.)

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(My commission expires March 30, 1914.)



